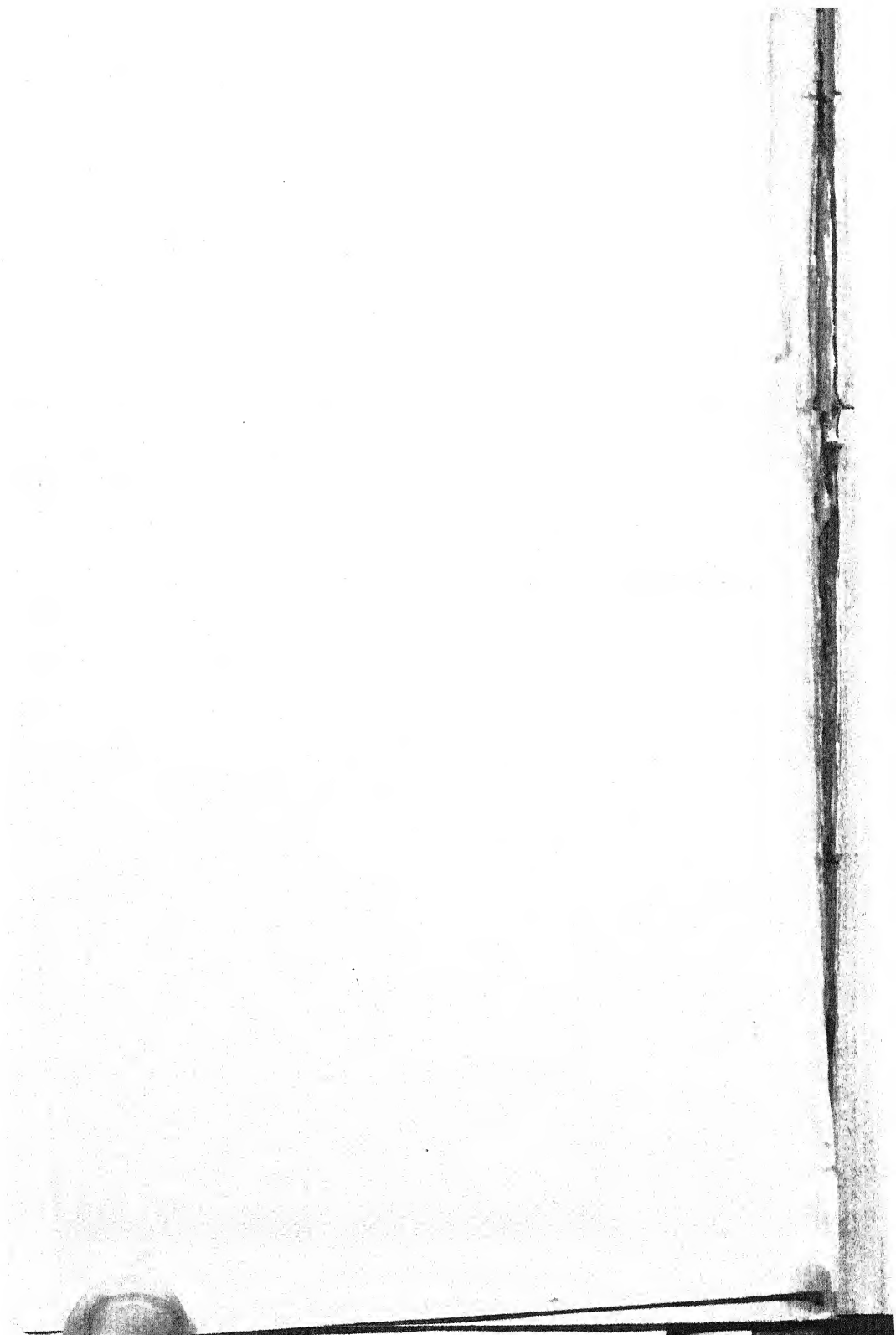


**INDIA BEFORE
AND
SINCE THE CRISIS**



INDIA BEFORE AND SINCE THE CRISIS

VOL. I

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By

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PREFACE

The present work incorporates the substance of *India in the Crisis* and *India Before the Crisis*. The matter has been re-arranged, carefully revised and brought up-to-date, and there are many additions. The reader's attention may be particularly drawn to the discussion of Recovery (chapter 15), farm relief in general and agrarian legislation in the Punjab and other provinces (chapters 19, 20 and 21), the sliding scale system of assessment and 'net assets' (chapter 22), and the working of Provincial Autonomy (chapter 24). The summary gives a bird's-eye-view of the whole ground covered.

B. N.

ERRATA

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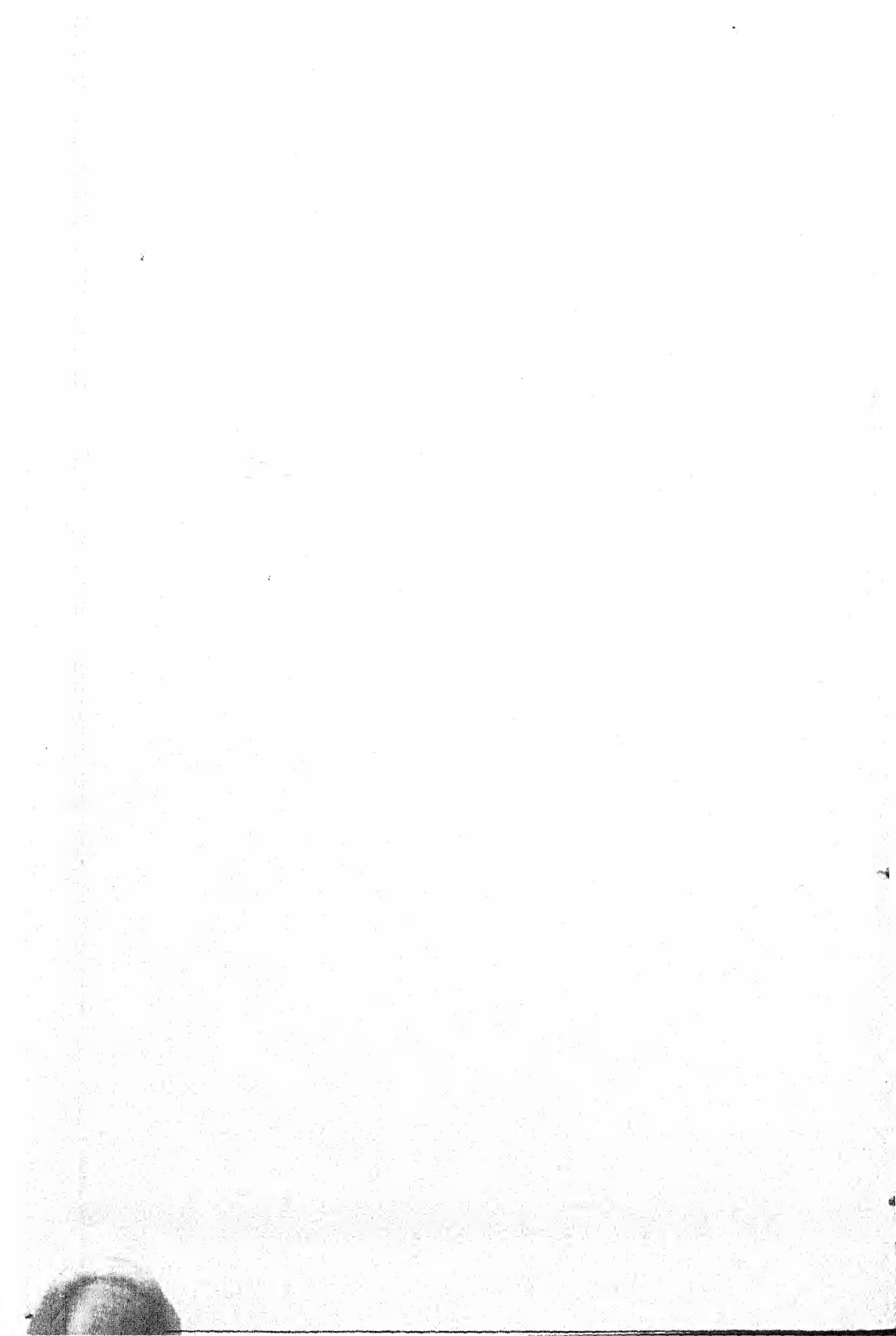
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Vol. I
SUMMARY

CHAPTER I.—THE POPULATION OF INDIA, AREA AND DISTRIBUTION,
PAGE 1.

India has an area of 1·8 million square miles and in 1931 had a population of 353 millions, which is a little more than one-sixth of the total estimated population of the world in 1931.

The mean density of the whole of India in 1931 was 195 to the square mile (176 in 1921 and 174 in 1911). Among the major Provinces, Bengal has a density of 646 and Burma only 63. The Punjab has a density of 238. Among the States, Cochin has a density of 814 as compared with Jammu and Kashmir 43, and Baluchistan States 5. Among the larger States the most densely inhabited is Baroda.

Great variations in density are found even within these political divisions.

Density is not greatest where the rainfall is heaviest. Hills and forests reduce the population in proportion to the area. Where, however, there are no hills and forests, and irrigation is not very important, density will be found to vary according to rainfall.

Irrigation increases density. The district of Lyallpur in the Punjab has at present a density of 368 per square mile; in 1891, before irrigation started, Lyallpur had only 7 inhabitants to the square mile.

In the industrial countries of Europe density is less dependent on natural factors and more on the conditions created by man. Belgium can support 707, Holland 627, and the United Kingdom 494 persons per square mile only with the aid of a highly developed industrial system.

In India the proportion of earners and working dependents supported by industry is 10 per cent, and most of these are cottage workers. Density in India is determined not by industrial conditions, as in Europe, but rainfall, irrigation and configuration of the land.

There is much evidence to show that the pressure of population on the land has steadily increased during the past 30 years. This is particularly true of the following Provinces:—United Provinces, Bihar and Orissa, Bombay, Madras, Bengal, Punjab and the N.W.F. Province. There is room for growth of numbers in Assam, and possibly also in C.P. and Berar.

Emigration affords little relief. Migration within the country is limited by three factors: (a) attachment to land, (b) indebtedness, and

(c) ill-health. Even if internal migration was absolutely un-hindered, it would not solve our problem.

We are confronted with a hopeless situation: (1) The development of 'a materialist standpoint' might lead to a limitation of births. But the masses of India are steeped in ignorance and superstition. A change in the religious outlook of the masses may take centuries. (2) Under the existing system of land-ownership no revolutionary change in the methods of cultivation can be expected. The modernization of Indian agriculture is impossible unless it is preceded by a very great development of industries. (3) The development of factory industries would relieve the pressure of population on the soil, but our industrial development is proceeding on wrong lines. We are concentrating on the production of consumable goods, and have almost entirely neglected the manufacture of capital goods. It is a process of building from the top.

India needs a change of system which may alter the whole structure of her economy.

CHAPTER II.—MOVEMENT OF THE POPULATION AND CIVIL CONDITION, PAGE 33.

Our rate of increase is irregular. When figures of real increase of numbers in India and England and Wales are plotted on a chart, India's curve has the shape of a W; that of England and Wales is very nearly a straight line dipping towards the end.

The growth of population in India is determined not merely by the relation between normal birth and death rates, but by abnormal causes which affect this relation, as famine and disease.

The rate of growth was 1·1 per cent in 1872-81. The terrible famine of 1876-78 reduced the growth of numbers.

The period 1881-91 was one of recovery, and the increase of population was 9·1 per cent, but famine and plague brought down the rate of increase to 1·4% in 1891-1900. The real increase of population in 1901-1911, a period of 'moderate agricultural prosperity' was 6·3%. In the next decade, 1911-21, the growth of numbers was cut down by the influenza epidemic. Influenza mortality is estimated at about 7 per cent of the population, or about 22 millions. Population increased by 1·2 per cent in 1911-21. The decade 1921-31 was free from famine and epidemics and the increase of numbers in this decade constitutes a record, 33·9 millions, or 10·6 per cent.

While the population of India tends to increase rapidly the actual

rate of increase between 1871 and 1931 was 33 per cent—it was slower than the rate of increase in the more important European countries, France alone excepted. In this period the population of Europe increased from 308 million to 506 millions, or by over 64 per cent.

Our birth and death rates are high. The birth and death rates have fallen heavily in the countries of Western Europe. Indian statistics show no marked tendency towards a fall. The birth rate will not fall without a change in the religious outlook of the masses, and so long as the birth rate is high, the death rate will remain high too.

Similarly there is no fall in the high rate of infant mortality. On an average it is about 20 per cent.

Our age-pyramid is the most regular, having the broadest base and the narrowest top. In India natural causes, or famine and epidemics, determine the changes in the age-constitution of the population.

The expectation of life has appreciable and steadily increased in most of the countries of Europe since 1871. The expectation of life in India at all ages is less than in other civilized countries. It increased in 1931 as compared with 1911. This would be regarded as a matter for satisfaction if we did not know that owing to the elimination of the weak and the unfit by the influenza epidemic of 1918-19 the population in the last decade contained an unusually high proportion of the fit and the strong. Epidemics in 1931-41, or in the following decade, will reduce numbers.

In marked contrast to European countries there is an excess of males over females in our total population. The deficiency of females is greatest in the Punjab. That the Punjab is "the gate-way and sword-hand of India" has nothing to do with the question. It is a question of taking proper care of female children, of raising the age of marriage, of avoiding too frequent births, of abandoning primitive methods of midwifery, of educating women and of treating widows better.

The number of the married per 1000 of those aged 0—15 years rose from 51 males and 144 females in 1921 to 77 males and 181 females in 1931. The Sarda Act came into force a year before the last census, and there was a rush to marry off children.

In European countries the percentage of men who marry below the age of 20 is insignificant. The highest proportion of men who marry (first marriage) in Europe are between the ages 25-29 and women between 20-24. The proportion of widows to the population is much higher in India than in Europe.

Between 1901 and 1931 the town population increased by 24 per cent and the village population by 19 per cent. But only 11% of the total population lived in towns in 1931. The growth of the larger towns in India is largely at the expense of the medium-sized towns. The

growth of towns is dependent upon the growth of industries. In view of the slow development of Indian manufacturing industries it is not surprising that the progress of urbanisation is slow.

The housing conditions in some of our cities are far from satisfactory. The congestion in certain parts of our towns much exceeds the maximum density in the most heavily populated parts of London.

In illiteracy India leads the world. In 1931 the proportion of literates of ages 5 and over was 9·5, of whom 1·3% were literate in English. Taking ages 10 and over there were 82·6% illiterate males, and 96·9 per cent illiterate females.

CHAPTER III.—THE MALTHUSIAN DOCTRINE AND OVER-POPULATION, PAGE 70.

Malthus thus summed up his conclusions regarding the growth of numbers:—

“The increase of population is necessarily limited by the means of subsistence:

“Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks:

“These checks, and the checks which keep the population down to the level of the means of subsistence, are moral restraint, vice and misery.”

Karl Marx condemned this Natural Law of Malthus as a partisan doctrine, but the Malthusian Doctrine has found many supporters in all countries. In England Dr. Marshall accepted the Natural Law of Malthus, and gave him “a place among the founders of historical economics.” He held that the second and third steps of Malthus’ argument, though “antiquated in form,” were “still in a great measure valid in substance.”

Malthus’ principle of population is based on the quantity of food produced relatively to the growth of numbers. The principle of population which is in operation in India at the present time has more reference to the distribution of wealth and income than to the amount of food produced by India.

The question of food supply is no longer local. People do not die in famines because of lack of food. They lack the means of buying it—which is different.

Between 1880 and 1910 the economic development of Germany was proceeding more rapidly than the growth of numbers, and in consequence the standard of living of the population rose.

The figures for the United States for the period 1849-99 are still more significant. The growth of numbers, under favourable conditions, is

SUMMARY

accompanied by a constantly rising standard of living. And the rise in the standard of living tends to lower the birth rate.

Over-population may be understood in an absolute or a relative sense. It is difficult to say whether any country is over-populated in the absolute sense, because the question of the optimum population that a country can support can never be answered definitely—the possibilities of economic development, colonization and commercial expansion cannot be exactly estimated.

India may not be over-populated in the absolute sense, but under existing conditions India is over-populated, and the Malthusian Law is in operation in India. This is shown by the growing pressure of population on agricultural resources, the extravagant reaction to disease, and the irregular movement of the population, rapid increase in one decade being followed by much slower increase, or practically no increase in the following decade.

A fall in the standard of living of large masses of the population is the inevitable consequence of a rapid increase of numbers when the economic resources of a country fail to expand correspondingly.

A fall in the standard of living weakens the disease-resisting power of the people. The reaction of the population to disease is suggested by Indian experience as a reliable test of over-population.

The solution of the problem lies in greater production of wealth and a better distribution of it. Landlordism as a factor affecting the distribution of wealth is of considerable importance in U. P. and Bengal, and even in the Punjab. A better distribution of wealth would raise the standard of living of the masses and create in them a desire for a higher and a richer life. No attention has been paid in India to the quality of the population. An enlightened, well-fed, well-clothed and properly housed population of 150 millions is better than a crowd of 357 millions, most of whom do not know the meaning of education and culture, are economically speaking more dead than alive, and exist only as *balidan* for epidemics.

CHAPTER IV.—AGRICULTURAL PRODUCTION AND RELATED PROBLEMS, PAGE 87.

The noteworthy changes in the yield of the principle crops, as compared with the pre-war position are a considerable increase in the production of sugar-cane, tea and groundnuts. Indigo has lost ground, but it is an old story. The production of rubber fell heavily in 1931-32 and 1932-33, but since then production has rapidly expanded.

Between 1911-12 and 1935-36 the area under all food-grains

INDIA BEFORE AND SINCE THE CRISIS

practically remained stationary. On account of the growth of numbers, India's surplus of food has dwindled. At the present time it may be estimated at about 5 million tons, as compared with 9½ million tons estimated by the Famine Commission of 1898.

In regard to the fertility of the soil, the Agricultural Commission of 1928 took the view that a stabilized condition has been reached, natural gains balancing the plant food-materials removed by crops and other losses. Dr. Voelcker, who reported on Indian agriculture in 1892, was of a different opinion.

Agricultural holdings are becoming uneconomic. The subdivision of land takes place according to our laws of inheritance; it cannot be checked without interfering with those laws.

The creation by legislation of impartible holdings was not recommended by the Agricultural Commission. One of the effects of such legislation must be to create a landless proletariat which is always a danger.

Fragmentation means scattered holdings. It is of two kinds, fragmentation of the land of permanent right-holders, and fragmentation of cultivation, which is much worse—each tenant, unable to rent all land from a single owner, rents small pieces from different owners.

Consolidation of holdings is being tried as a remedy against fragmentation. But unless alternative means of livelihood are discovered, the position of landowners and cultivators must continue to deteriorate from decade to decade.

A very great deal has been done by Government to improve agriculture. A Department of Agriculture exists in every Province. The total provincial expenditure on agriculture now amounts to over 2 crores annually. Agricultural Research is directed by the Imperial Council of Agricultural Research, subsidized by the Central Government. Cotton research is carried on by the Central Cotton Committee. There are other Research organisations, the most important among them being the Imperial Research Institute formerly located at Pusa, and now at Delhi.

Indian agriculture needs a fundamental reorganisation. No real progress is possible without radical changes in the system of land-holding and methods of cultivation.

In regard to animal husbandry, the position is extremely unsatisfactory. The number of bullocks, in different Provinces, varies directly with the number of cultivators and inversely with the size of the holding. "India is attempting to maintain an excessive number of cattle" (Agricultural Commission). It is not necessary that the quality of cattle should deteriorate with increase in their number. But conditions in India are peculiar.

The care of forests is entrusted to Provincial Forest Departments. The total area of forests including Burma, is 1 million square miles. The

SUMMARY

proportion of forest to the total area varies greatly in the case of different Provinces (Burma 65·6%; Punjab 5·4%). The work of the Forest Department is not only afforestation, but the protection of existing forests.

There has taken place a heavy decline in revenue from forests on account of the fall in the value of forest produce.

Irrigation is a very important factor affecting agriculture. The means of irrigation are canals, tanks and wells. The total irrigated area in British India is over 51 million acres. Of all Provinces the Punjab has the largest irrigated area, about 15 million acres. Of the irrigated area in the Punjab, about 10 million acres are irrigated by Government canals and about 4·4 million acres by wells. Tanks are of importance in Madras and Bihar and Orissa.

While there cannot be any dispute about the benefits of canal-irrigation, its rapid development in the Punjab has given rise to a serious problem—water-logging.

Water-logging is due to the rise in the spring level. When the spring level has risen so much that it is only within a short distance, or a few feet of the ground surface, water is drawn up by capillary attraction. The affected land is then covered with *kallar* (salts), and finally it is turned into a swamp.

It has been estimated that of the water taken in at the head-works of the Punjab canals, about one-third is lost, through percolation, in the main canals and branches. Of the remaining water, that is water in the distributaries and water-courses and that supplied to the fields for actual irrigation, also one-third percolates to the sub-soil to raise the spring level.

When a canal is so constructed that it obstructs the natural drainage of a tract (as was the old Western Jamuna Canal), water-logging will appear after heavy rains. Remodelling of the canal is necessary in such cases.

The Drainage Board is concerned with improving the natural drainage of the country.

The lining or water-proofing of a canal (e.g., Gang canal) is an expensive remedy.

Apart from the opening out of closed and obstructed drainages, the only two remedies which have been found effective are (1) replacing canal irrigation by irrigation from wells, and (2) pumping from sub-soil.

Unfortunately the cost of well-irrigation is about 6 times greater than that of canal irrigation (Rs. 22 and Rs. 3/8 per acre respectively). But it is obvious that where water-logging is threatened, canal irrigation must be restricted. Attempts are also being made to prevent over-irrigation.

Irrigation engineers now take a less pessimistic view of the situation than they did before. During the past few years, the *sem* area has decreased, but the *thur* area has increased.

There is no lack in India of raw materials required for the development of metallurgical industries. Even if India were wholly isolated from the rest of the world, she would be able to supply very nearly all the requirements, in so far as the mineral world is concerned, of a highly civilized community.

The total value of minerals produced in 1937 was £25,000,000.

Coal:—The production of coal increased from 4 million tons in 1897 to 25 million tons in 1937. The coal industry is suffering from over-production. The consumption of coal in India is estimated at 18 million tons, while the producing capacity is 26-27 million tons.

Regulated production is the way suggested out of the 'Valley of Despair.'

A coal grading Board was constituted in 1925.

Manganese:—In 1937 the output of manganese was over 1 million tons, as compared with 218,000 tons in 1933, and over 1 million tons in 1927. The depression in the industry was due to the world depression, which reduced the output of steel, and Russia's non-economic methods of exploitation.

Manufacturing Industries:—India's pre-war industrial weakness was chiefly due to the 'let alone' policy of Government. The war brought a change in Government attitude, and the Government Munitions Board paid special attention to the encouragement of 'key' industries. The Industrial Commission (1916-18) drew attention to the danger of industrial deficiencies and the Fiscal Commission (1921-22) recommended the adoption of a policy of protection applied with discrimination. The Tariff Board deals with the claims of industries for protection.

Iron and Steel:—Protection was first granted to the Iron and Steel industry in 1924. The question was re-examined in 1926 and 1934. The new scheme of protection will continue till 31st March, 1941.

Two scales of duties have been adopted, 'basic duty' and 'additional duty.' The 'basic duty' was fixed with reference to the price of steel imported from United Kingdom. Continental steel pays the 'basic duty' and the 'additional duty,' which is based on the difference between the prices of British and continental steel, making allowance for the difference of quality between the two.

The output of the Tata Iron and Steel Company (finished steel) averaged 400,000 tons between 1926 and 1933; in 1935-36 it was about 700,000 tons.

It is hoped that when Continental prices rise to a more economical level, the Indian industry will be able to dispense with protection.

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Labour conditions at Jamshedpur are satisfactory.

The Cotton Mill Industry:—The industry had made considerable progress before the war—the transformation from a spinning to a weaving industry had already taken place.

During the war the number of looms increased by 25%. The three years immediately following the close of the war were a period of great prosperity for the industry. The boom was followed by the inevitable depression. A demand for protection was made by the industry in 1926, but protection was not granted before 1930. Since then, assisted by the political movement, the industry has made rapid progress.

Imports of cotton piece-goods fell from 3,197 million yards in 1913-14 to 591 million yards in 1937-38, while the cloth made in Indian mills increased from 1,164 million yards to 4,084 million yards in the same period. India can easily do without imported cloth now.

Imports from Japan are now regulated by the new trade agreement concluded in April, 1937. As in the previous agreement, imports are linked with Japan's purchases of Indian cotton.

The level of technical development in the Indian industry is high—it has elicited praise from foreigners. The future of the cotton industry is bright—provided efforts to lower the cost of production through rationalisation of methods of production are not relaxed.

The Sugar Industry:—Protection was granted to the industry in 1932. The sugar industry has developed very rapidly. In 1928-29 the imports of Java sugar amounted to 937,000 tons, valued at 16 crores. Imports at present are so small as to be negligible. Production of factory sugar from cane amounts to 930,700 tons. In the whole of India there are 136 sugar factories. Of the total quantity of sugar, the United Province produces 57 per cent and Bihar 24 per cent. The growth of the industry had led to a considerable increase in the area under sugar-cane (particularly that under improved varieties) and the production of gur.

The yield of the sugar excise is a little over 3 crores. The import duty yielded about 7 crores. The development of the sugar industry has thus meant a loss of about 4 crores annually to the Central Government.

The Match Industry:—Before the year 1921 there was a single match factory in India. The imports of matches in 1919-20 amounted to 15 million gross boxes. The Government of India were led to tax imported matches for fiscal reasons. Match factories began to spring up in India when the duty was raised to 100 and 200 per cent *ad valorem* (1921-22). Imports of matches at present are of little importance, and home production is sufficient to meet the demand. In 1935-36 the output of the Indian industry was 24.4 million gross boxes of safety matches.

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Cement:—The manufacture of Portland cement was first undertaken during the Great War. The output was taken by the Munitions Board. Control ended in 1919. Production continued to increase and cut-throat competition started among producers, which brought down the price. In 1926 the Indian Cement Manufacturers' Association was formed. At present both the output and the price are controlled by a merger which was effected in 1936. The cement industry is working more or less, as a single organisation.

The imports amounted to 32,000 tons in 1937-38. India produced 891,000 tons of Portland Cement in 1935-36.

Paper:—Protection was granted to the bamboo and the paper-pulp industry in 1925. The paper industry is an old industry. After the war the industry suffered much on account of foreign dumping.

Paper has hitherto been made in India from *sabai* grass. But *sabai* grass, on account of its high cost, has no chance in competition with bamboo pulp. The future belongs to the bamboo and the paper pulp industry.

India's bamboo resources are almost inexhaustible. The cost of chemicals is high, and most of the mills have to pay heavy transportation charges for coal. But on the whole the prospects of paper making from bamboo pulp are hopeful.

In 1926 the output of our mills amounted to 33,000 tons a year; in 1935-36 it had increased to 48,100 tons. Including Indian production, the total consumption of paper at the present time is over 200,000 tons.

It is not possible to make certain kinds of paper in India: newsprint, cheap wrapping paper, art paper, blue match and tissue paper. We cannot have cheap newspapers unless we continue to use (imported) papers containing a high proportion of mechanical wood-pulp. Old newspapers, which serve as wrappers, are also imported.

Jute:—The fall in the price of raw jute has disastrously affected the grower in Bengal. The contraction of world trade reduced the foreign demand for jute. In 1932 the Jute Mills Association decided to curtail production. There were two undesirable results: (1) In India several new mills were erected, and abroad foreign manufacturers succeeded in capturing an appreciable amount of Calcutta's trade. The restrictions on production were gradually withdrawn, but in October 1938 the Bengal Government were forced to limit the working hours in all jute mills to 45 per week.

Voluntary crop restriction is being tried in Bengal, reduced quotas having been fixed for each District. If voluntary crop restriction through persuasion fails, compulsory restriction through legislative action may be resorted to.

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Tea:—The price of tea fell heavily in 1930. To raise prices, at the suggestion of the Dutch a plan of international control was devised. The principal exporting countries undertook not to export more than a given quantity, which is to be revised annually. Towards the end of 1937 the continuance of international control was agreed to by the participating countries and the scheme was extended for 5 years from April 1938.

Propaganda to encourage tea-drinking in India is carried on by the Indian Tea Market Expansion Board. It is estimated that the consumption of tea in India has risen from 18 million lbs. in 1902-03 to 90 million lbs. per annum at the present time.

Indian Factories, 1936:—The total number of factories in British India in 1936 was 9,323, and the labour employed was 1,652,000. The factory workers form less than 1 per cent of the population. Our industrial proletariat is of little significance.

The industries which provide the largest employment for labour are textiles; engineering; food, drink and tobacco.

A comparison of Indian figures with those for Great Britain shows that British workers engaged in the manufacture of metals, machines, implements and conveyances, exceed the total number of our factory workers. In an industrial country the manufacture of capital goods occupies the largest proportion of workers, and remarkable as it may seem, the level of prosperity is higher where a considerable proportion of the population is engaged in making indirect goods than where an overwhelming proportion of the population is producing consumable commodities.

CHAPTER VI.—COTTAGE INDUSTRIES, PAGE 163.

Very great importance is attached both in official and non-official circles to the revival of cottage industries as a subsidiary source of income to the village people. It is even thought that the development of cottage industries would relieve the pressure of population on the soil!

Mahtma Gandhi founded the Village Industries Association in 1934. For the first time the Government of India gave 113 lakhs to the Provinces in 1935-36 for rural reconstruction.

The Provincial Industries Departments are largely concerned with the hand-worker. The total Provincial expenditure on industries increased from 64 lakhs in 1921-22 to 124 lakhs in 1938-39.

A Provincial Industries Department maintains (1) Industrial schools, in which various crafts are taught (2) special technical institutions, and

(3) a Research Laboratory. It organises demonstration parties to introduce improved implements and new designs among hand-workers, and assists industrialists with loans and technical information.

The Industries departments are doing useful work, but the revival of cottage industries, in the face of machine competition is a hopeless task. With the growth of imports and Indian machine competition the proportion of the population dependent on industries (largely cottage workers) has steadily declined while that dependent on the land has steadily increased.

Cottage industries would prosper if machine competition were eliminated. But that is not possible.

In European countries increasing rationalization, scientific management, and mechanisation of industries have effected an incredible saving of labour. The change is so important as to be called a second industrial revolution. But in India economic reconstruction means reversion to antediluvian methods of production.

The Agricultural Commission considered the question. Their conclusion was that the revival of rural industries could make little or no contribution in reducing the heavy pressure on the land and that they could not, as a rule, hope for ever to survive the increasing competition of organised machinery.

A review of the condition of cottage industries in the different provinces shows that everywhere the growing intensity of machine competition is adversely affecting rural artisans and other cottage workers.

It is also a mistake to think that the rural people can be made much more self-reliant self-sufficient than they are at present. Roughly, to the extent of more than half of their needs, people in the village are self-reliant and self-sufficient. Then there are certain goods and services, procured from the outside world, which are indispensable (e.g., kerosine oil, medicines, railway travelling, education). As regards food, some consumption of refined sugar, rice, meat, fruits and vegetables has to be allowed for. All that may be objected to is the expenditure on cloth imported from outside. This accounts for 10 or 11 per cent of the total expenditure. Can the cultivator be persuaded to give up the use of the fine and gaudy mill-made fabrics on special occasions? (Ordinarily village people wear khaddar). Can we, who live in towns, do without silks, carpets and other luxuries?

The utmost that one may hope to achieve is a slight reduction in the use of mill-made cloth and an increase in the quantity of yarn produced in the villages.

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CHAPTER VII.—INDUSTRIAL LABOUR, PAGE 186.

Problems connected with Indian labour were examined by the Indian Labour Commission in 1929. The recommendations of the Commission covered a wide field. Effect has been given to many of these recommendations:—

Factories Act, 1934: Hours of Work: Weekly limit 54 for perennial and 60 for seasonal factories, daily limit: 10 for perennial and 11 for seasonal factories. A child has been defined as a person under 15. Children under 12 are not allowed to work in factories. Hours of work for children have been fixed at 5 (spread-over $7\frac{1}{2}$ hours; in the case of adults 13 hours).

Effect has been given to the recommendations of the Labour Commission concerning health and safety of workers, cleanliness, ventilation, artificial humidification of factories, notice of certain accidents and other matters.

The pledging of children's labour is prohibited (Act of 1933). Mining legislation has been undertaken. Deductions from wages have been regulated. Payment of compensation in case of accidents is according to the Workmen's Compensation (Amended) Act of 1933. The compensation actually paid increased from $6\frac{1}{2}$ lakhs in 1925 to $14\frac{1}{2}$ lakhs in 1936.

The Trade Disputes Act of 1923 was amended in 1932. The first part of the Act relates to the establishment of tribunals for the investigation and settlement of trade disputes. The second part is concerned with public utility services. It is a penal offence for workers employed on monthly wages in such services to strike without due notice.

A strike or lock-out is illegal when its object is something else than the mere furtherance of a trade dispute, or when it is designed to coerce the Government either directly or by inflicting hardship on the community.

Provincial labour legislation relates to a variety of subjects, the most important of which are workmen's protection against money-lenders, trade disputes, maternity benefits, payment of wages, and unregulated factories. The Bombay Industrial Disputes Bill (1938) provides for the registration of certain unions and conciliation to start functioning immediately a dispute is likely to occur. The Bombay Shops Bill fixes hours of work for shop-employees. The Central Provinces unregulated Factories Act, 1937, is a model for other provinces to copy.

The Standard of Living:—Much light is thrown on the standard of living of industrial workers by the investigations carried out by the Bombay Labour Office, and those made by the Labour Commission. The condition of the industrial worker is one of general poverty: "Thus poverty leads to bad conditions, bad conditions to inefficiency, and inefficiency to

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poverty." In most industrial centres the proportion of families or individuals in debt is two-thirds of the whole.

Cash wages on tea-plantations in Assam are particularly low. The Labour Commission recommended the establishment of statutory wage-fixing machinery in Assam, but nothing has been done in the matter.

Wages in India and Russia:—Wages in India are low, but incredible as it may seem, the purchasing power of the average Indian factory worker is not much smaller than that of the average factory worker in socialist Russia. The average wage in the Bombay Engineering industry (Rs. 39/- a month=312 roubles in purchasing power) is higher than the average wage in the best-paid Russian industries. Allowing for the increase in wages granted in 1938, the purchasing power of the average textile worker in cotton mills in the Bombay Presidency is probably greater than that of the average worker in light industry in socialist Russia.

The proportion of family income spent on food by Bombay workers fell from 56·8% in 1921-22 to 46·60% in 1923-33. The percentage of expenditure on food in Ahmedabad working class family budgets fell from 57·90 in 1926 to 49·31 in 1933-35. In Russia no less than 67·3 per cent of the family income was spent on food in 1935.

Industrial Disputes:—379 disputes occurred in 1937, involving 647,000 workmen. Generally speaking the depression was a period of progress and development for Indian manufacturing industries. As compared with our 146 disputes in 1933, the number of disputes in U. S. A. averaged 130 per month.

Trade Unions:—The Trade Union Act came into force on 1st June, 1927. The registration of trade unions is not compulsory, but any seven or more members of a Trade Union may, under certain conditions, apply for the registration of a Trade Union under the Act. The two chief features of the Act are the principle of immunity in respect both of civil and criminal proceedings against the Trade Union, and the constitution of a separate fund for political purposes. In the year 1935-36 there were 236 registered unions in British India, with a membership of 268,000. At the end of September 1938 Bombay had 147 Unions with a membership of 135,000; of these only 53 were registered.

The progress of the labour movement is slow owing to (1) the migratory character of the bulk of Indian labour, (2) poverty of the workers, (3) differences of language, (4) social and communal differences, and (5) ignorance, greed and incompetence of many so-called labour-leaders.

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CHAPTER VIII.—EDUCATED UNEMPLOYMENT, PAGE 212.

The problem has been examined by special committees in Bengal, U. P. (twice), Madras, and the Punjab (twice). There is general agreement about the causes of unemployment.

Between 1911-12 and 1935-36 the number of the middle-passed increased about 3 times, of under-graduates about 9 times, and of graduates $4\frac{1}{2}$ times.

In its inception the aim of the system of education was to train boys for clerical vocations or to produce a class of 'interpreters.' The supply of clerks and interpreters much exceeds the demand.

The suggestions made for solving the problem are the following:—

1. Economic development of the country should be encouraged. (2) Technical education should be extended. (3) Cottage industries should be revived. (4) Village life should be made more attractive. (5) Small holdings should be provided for educated youngmen.

Unemployment among medical practitioners may be reduced by encouraging doctors to settle down in rural areas. Certain new professions may be created or developed: pharmacy, dentistry, accountancy, architecture, librarianship, insurance work, and journalism.

The work of the Provincial Committees has shown both the complexity and the gravity of the problem. Why do youngmen seek a living through education? Why do they leave their ancestral callings?

Machine competition has ruined many cottage industries. The situation is not changed by sermons on the 'dignity of labour' or the opening of technical schools for the training of hand-workers.

Sons of zamindars seek Government employment because agriculture has ceased to be remunerative. It is better to be a peon than a peasant.

We are confronted with a hopeless solution. Year after year we are adding to the number of unemployed matriculates, and graduates, destined to lead a life of misery and starvation.

There is one and only one solution of the problem—economic planing. Planless technical education will not reduce the number of the unemployed. Before creating technicians we must create the industries which will employ them.

A planned economy for India will aim at industrialising India within a given period. Educational planning must necessarily form an integral part of economic planning.

The question of State versus Company management of railways was discussed by the Acworth Committee of 1920-21, but the recommendations of the Committee on this subject were not unanimous. The Government of India are convinced that State management in other countries has almost universally failed. But real Company management is impossible in India. In the case of the more important lines the greater part of the capital was found by the Government, and Government is the real owner. Under Indian conditions Company management means a division of responsibility which does not make for efficiency. Indian public opinion is overwhelming in favour of State management, partly because it means more higher jobs for educated Indians.

The Government have not accepted the principle of State management of Indian railways, but in 1924, when railway finance was separated from the general finances of the country, Government undertook that the arrangements for separation should hold good only so long as the E. I. Railway and G. I. P. Railway and the existing State-managed railways remained under State management.

The Acworth Committee recommended the complete separation of the railway budget from the general budget of the country. Under the old system net receipts from the State Railways (worked by State and by companies) formed part of the general revenues of the country out of which allotments, varying from year to year, were made for capital expenditure. The allotments were inadequate. Under present arrangements, which came into force from the year 1924-25, the railways make a fixed contribution to the general revenues equal to 1 per cent of the capital at charge of commercial lines *plus* 1/5th of the surplus profits of the penultimate year.

Of the important lines 5 are owned and worked by the State, four are owned by the State but worked on its behalf by guaranteed companies, two important lines and many others are owned by private companies, some of which are worked by private companies, while others are worked by the State or by the companies which work State-owned systems; several minor lines are the property of District boards, or enjoy a guarantee of interest by such Boards. Over all lines in British India, however, the Government of India exercise general powers of control.

Railway construction started in 1849 under the guarantee system. In 1862 an attempt was made to promote railway construction by means of subsidies, instead of a guarantee of interest. The subsidies, however, failed to attract capital. Two changes were made in Government policy in 1869, (1) more profitable arrangements from the point of view of Government

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were made with guaranteed companies, and (2) Government decided to construct railways itself.

In 1880 the Strachey Famine Commission urged the necessity of a rapid extension of the railway system. More guaranteed companies were formed after 1880, but in each case the terms of guarantee were more favourable to the Government than in the case of the first guaranteed companies. The Government have freely exercised their right of terminating the contracts of the railway companies.

The total mileage open to traffic is about 43,000.

The guiding principles in the development of our railway system have been two: humanistic and Imperialistic. The railway is an important means of famine protection; and railways have helped in (a) the consolidation of political power and (b) the development of exports of raw produce and imports of manufactured goods. Our railway system has not developed naturally, like the English system, according to the requirements of internal trade and industry.

Railways in the Depression:—In the period of 5 years ending 1926-29 the average annual contribution of the railways to the general revenues was about 6 crores. In this period the net revenue of the railways exceeded the interest charges each year by $9\frac{3}{4}$ crores on an average. In the year 1929-30 net revenue was still greater than interest charges but from 1930-31 to 1936-37 interest charges each year exceeded the net railway revenue. The net revenue was lowest in 1932-33 and the deficit highest in the same year. At the end of 1936-37 the unliquidated liabilities of the railways amounted to 61 crores, of which $30\frac{1}{4}$ represented the amount borrowed from the depreciation fund and Rs. $30\frac{3}{4}$ crores unpaid contribution to general revenues.

The position improved in 1937-38. The surplus realised fell a little in 1938-39, but for 1939-40 a surplus of 213 lakhs is anticipated.

The railways have taken steps to improve earnings and reduce working expenses.

Rail-road competition:—Motor bus competition is keenest over short distances and, according to the railways, unfair. Control over motor vehicles has been made stricter, but unfair competition continues. Road competition has 'disturbed the harmony and balance of the railway rate system'. The new competitors 'own swings but contract no losses on the roundabouts.'

The utility of buses where railway service is inadequate is obvious. But it is necessary to coordinate both methods of transport. Both rail and road transport have their appropriate field. The problem is that of confining each to that field, and that has not yet been solved.

Indirectly road competition has made 3rd class railway travelling more comfortable, or less uncomfortable, than it was ever before.

CHAPTER X.—FOREIGN TRADE AND TARIFFS, PAGE 247

Roughly, about $\frac{3}{4}$ ths of our imports and $\frac{1}{4}$ th of our exports consist of articles wholly or mainly manufactured.

The character of our foreign trade in the 16th and 17th centuries was essentially different. The bulk of the exports consisted of cotton goods; the imports were chiefly gold and silver, a few articles of luxury and fancy goods meant for the rich, and spices.

As at the present time, exports much exceeded imports in value. But our favourable balance of trade is now a sign of our debtor position. In the past not only the balance of trade but the balance of payments was heavily in our favour. In other words, India was a creditor country and the world paid her tribute in silver and gold.

The Tariff:—Under Company rule the general rate of duty levied on imports into India was 10 per cent *ad valorem*. The 'reform' of the tariff in accordance with the principles of free trade began in 1878. The abolition of the cotton duties in 1879 met with strong opposition. In 1894 a 5 per cent duty was imposed for financial reasons on cotton goods and yarn imported into India, and a counter-vailing excise duty of an equivalent amount was imposed on cotton goods made in Indian mills. In 1896 both the duty on cotton goods and the excise were lowered to $3\frac{1}{2}$ per cent. The excise was abolished in 1926.

At the outbreak of the war the general rate of duty was 5% *ad valorem*. Financial necessity compelled the Government to revise the customs tariff in 1916, in 1921-22 and again in 1922-23. The general rate of duty now amounted to 15% *ad valorem*.

The whole question of India's fiscal policy was examined by the Fiscal Commission of 1921-22. The Commission recommended not protection, but protection applied with discrimination—the Commission were anxious to reduce the burden which protection inevitably imposes upon the consumers, to prevent the establishment of unsuitable industries (which might happen if all kinds of industries were indiscriminately protected), and to minimise the effect of protection on the balance of trade, or to maintain a favourable balance of trade.

At present the general rate of the tariff is 25% *ad valorem*.

Imperial Preference.—The average percentage share of the United Kingdom in our imports in the five years ending 1875-76 was 77·9, and in our exports 49·6. For 1913-14 the corresponding figures are 64·2 per cent (imports) and 23·5 per cent (exports). The decline in the share of the United Kingdom in our foreign trade was due to the growing competition of Germany, Japan and the United States.

The question of Imperial Preference was first officially considered by

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India in 1903. Lord Curzon's Government rejected Imperial Preference because of the danger of retaliation on the part of foreign countries. The question of making the British Empire self-sufficient was examined during the Great War. The United Kingdom adopted the policy of Preference in 1919. The Indian Fiscal Commission laid down the following three principles which were to govern the application of a policy of Preference: (i) no preference was to be granted without the approval of the Indian Legislature, (ii) no preference given was, in any way, to diminish the protection required by Indian industries, and (iii) preference was not to involve any appreciable net economic loss to India. The Commission did not fail to emphasize the Imperial aspect of the question.

The Ottawa Agreement was signed in August 1932. The preference granted by India amounted, in most cases, to 10 per cent. In return the United Kingdom granted preference to specified Indian articles and undertook to encourage the consumption of Indian cotton in Lancashire.

The Ottawa Conference also adopted a resolution concerning industrial co-operation between various parts of the British Commonwealth. But no scheme of Imperial division of industrial activities has been worked out.

An examination of trade statistics shows that the Ottawa Agreements undoubtedly encouraged inter-Imperial trade. The share of the Empire in British imports increased from 35.4 per cent to 39.1 per cent and in British exports from 45.3 per cent to 48.9 per cent between 1932 and 1936. The share of the United Kingdom in our imports increased from 36.8 per cent in 1932-33 to 38.4 per cent in 1936-37; during the same period her share in our exports increased from about 28 per cent to 32.4 per cent.

The Indian Assembly voted for the termination of the Ottawa Agreement in 1936. After protracted negotiations a new agreement came into effect from 1st April, 1939. The chief features of the new Agreement are the linking of the preferences for United Kingdom piece-goods with the off-take of Indian cotton by the United Kingdom on a reciprocal graduated scale; preference for 82 per cent of Indian exports to the United Kingdom; and a reduction from 106 to 20 United Kingdom items receiving Indian preference.

The Indian Assembly rejected the new Agreement, chiefly because of reduction in the duty on imports of Lancashire cloth. But in the new conditions of world trade it is not possible for India to stand alone. The United Kingdom is the largest single purchaser of our goods and the British Empire takes something less than half of our total exports.

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CHAPTER XI.—GOLD EXPORTS, PAGE 272

Net imports of gold between 1900-01 and 1930-31 amounted to Rs. 548 crores. Of this, gold worth over Rs. 321 has been exported since 21st Sept. 1931.

The following advantages are claimed for gold exports: (1) Gold exports have led to an improvement in Government credit. It is certain that but for gold exports exchange would have fallen. (2) Gold exports have strengthened India's public reserves, through the addition of, not gold, but sterling securities to the reserves. (3) Gold exports have meant the conversion of one form of reserve (gold hoarded by the people) into another (interest-bearing Government obligations). (4) Gold exports have encouraged the flow of international trade. It is again certain that but for gold exports the fall in imports would have been heavier. (5) The export of gold means that the people of India are using their reserves as reserves are meant to be used.

The fact is that much of the gold exported was 'distress' gold.

The present price of gold is a little over Rs. 37 per tola. The future price of gold depends on two factors, (i) the extent of devaluation in England and (ii) the rupee-sterling exchange. If the £ were stabilized at 4'67½ dollars, but exchange fell to 16d., the price of gold in India would rise to over Rs. 41 per tola.

The production of gold has increased enormously, but (i) if war comes the price of gold will rise, and (ii) so long as the danger of war remains, hoarding by private individuals and Central banks in the west will keep up the demand for gold and its price.

The unrestricted export of gold is not a matter for rejoicing. Gold is not like tea, jute or cotton; and the gold that has gone has gone for good. And we are living on our capital.

CHAPTER XII.—INDIAN PRICES, PAGE 291

1861-1905. Prices gradually rose. This was chiefly due to the rise of the export trade. But prices were still subject to seasonal fluctuations.

1905-1914. Prices rose continuously and rapidly ('famine prices without famine'). The rise of prices was connected with the gold exchange system. Before 1893 hoarding and melting accounted for about 45-50 per cent of the coinage. When the rupee became a token coin, the melting of rupees ceased and gold was preferred for hoarding purposes. The rise of prices became very marked after 1905; in the triennium 1905-06 to 1907-08 the total net coinage of silver exceeded the total net coinage in any period of five years before the closing of the mints.

1914-29. All prices rose during the Great War but those of exports rose to a smaller extent than the prices of imported goods. The reason was shortage of imports. Currency inflation on an extremely modest scale as compared with European countries also assisted the rise of prices.

Prices reached their highest level in 1920, after which they fell. The prices of post-War years were inflated. Between 1920-21 and 1929-30 net withdrawals of currency amounted to 86 crores.

Prices since 1929. From 141 in 1929 the Calcutta index (annual average, July 1914=100) fell to 87 in 1934. The index rose steadily thereafter to 102 in 1937, but fell to 95 in 1938. The effects of the heavy fall of prices may be thus summarised:

(i) Agriculture has become unremunerative over a large part of the country, (ii) the result in the case of the tenant is that he works almost entirely for the benefit of the landlord, (iii) the burden of rural debt has increased beyond the capacity of the borrower to pay, (iv) the burden of Government dues has become intolerable, (v) the agriculturist suffers specially because what he buys is dearer and what he sells is cheaper than before, (vi) the country as a whole is a loser since it has to part with a larger quantity of primary products to obtain a given quantity of manufactured imports, and (vii) imports have been paid for to an amount over 321 crores by the export of gold.

CHAPTER XIII.—THE CRISIS, PAGE 311

The Crisis, which began with the heavy fall of prices in 1929, was different from the ordinary conjunctural crises. The crisis was world-wide. There is not much evidence of an extraordinary or universal boom, preceding the depression. There was an improvement in some countries and a recession

in others and the degrees of improvement or recession in different countries were different. Boom conditions, however, did exist in the United States in 1928 and 1929. There was no great rise of prices but business profits increased on account of the fall in costs of production made possible by technical progress. Easy credit was largely utilised for speculative purposes and when discount rates were raised by the Federal Banks, there was a stock exchange crash.

The fall of agricultural prices made it difficult for agricultural countries to pay their debts, and their gold reserves began to disappear. Before the abandonment of the gold standard by England, Uruguay, Argentine, Australia and Mexico had already suspended the gold standard officially. The currencies of six other countries had also depreciated in relation to gold.

The *immediate* cause of the abandonment of the gold standard by England was the drain of gold. The weakness of the Creditanstalt (Austrian bank) in 1930-31 had repercussions in Germany whose short-term indebtedness was very considerable. Relief was given to Germany by the 'Stand-still Agreement,' but the panic spread to England and the Bank of England began to lose gold. The drain of gold ceased only with the suspension of the gold standard.

England's return to gold in 1925 was a mistake and, in view of her declining exports, quite apart from the drain of gold in 1931, it would have been impossible for England to remain on the gold standard much longer.

CHAPTER XIV.—THE CRISIS (CONTD.) CAUSES MONETARY AND NON-MONETARY, PAGE 330

There is no agreement among economists regarding the causes of the crisis.

The monetary explanation runs as follows. The War made France and the United States creditor nations. They insisted on payment in gold and 'bottled up' the gold they received. The blame for the crisis thus rests on these two countries. But high authorities like Rist (France) and Irving Fisher (United States) take a different view. The situation in the gold-losing countries might have been met by economising the use of gold or 'slimming the Golden Calf' (Withers). The Golden Calf, however, was not slimmed.

The non-monetary explanation lays emphasis on over-production. Indisputable evidence exists to show that the agricultural revolution altered

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the whole structure of world supply and world demand in the case of wheat, cotton and other primary products. The industrial output of the world was also rapidly expanding—attention may be particularly drawn to the growth of 'coloured' capitalism. The true explanation of the crisis lies in structural over-production rather than in conjunctural expansion.

It is not possible to frame monetary policies so as to counteract the effects of fundamental structural alterations in supply and demand.

The fall in the price of silver reduced the purchasing power of silver-using countries. But the purchasing power of India depends more on commodities that she produces and sells abroad. In any case, the loss of purchasing power on account of the fall in silver was more than counter-balanced by the sharp rise in the price of gold.

The high level of taxation in many countries retarded the adjustment of industry and commerce to the new conditions of competition.

The rise of national economies (Autarkie) is largely the result of the depression. It is an attempt by each country to safeguard its own position. The protection of agriculture in the industrial countries of Europe inevitably reduced their demand for the produce of agricultural countries.

CHAPTER XV.—RECOVERY, PAGE 366

The worst year of the depression was 1932-33, after which there began a gradual revival of trade and industry. The recovery has not been steady and continuous; it has been marked by 'notable set-backs.' The year 1936 was 'one of rapidly expanding production and of equally growing optimism.' Progress continued until the first quarter of 1937, when signs of another depression became noticeable.

Factors of Exjansion: (1) An attempt was made to re-adjust supply to demand by controlling production. The supply of primary products was restricted. In addition, national schemes were evolved for the combined regulation of imports and internal production in many countries; the output, sales and prices of many manufactured commodities were regulated by means of national and international cartels.

(2) A second factor in recovery was currency depreciation. The devaluation and depreciation of a number of currencies created a difficult situation for the Gold Bloc. The method of 'self-castigation' (deflation) was tried by Italy, Germany, Belgium, France, Holland, but without relief. In the end Belgium devalued her currency and the conclusion of the Tripartite Currency Agreement between France, England and the United

States in Sept. 1936 was followed by devaluation in Switzerland, Holland and Italy.

When the Government of India state that a lowering in the ratio would do no good to any body except Indian moneyed and speculative interests, they ignore the beneficial results of devaluation to which the currency history of the world in recent years bears eloquent testimony.

(3) Re-armament expenditure (estimated at £3,000,000,000 for the whole world in 1936) generated employment and incomes.

(4) National recovery has been helped by the new methods of trading, that is, trade agreements, monetary and quantitative restrictions applied to international buying and selling, bilateral trade and clearing systems.

Industrial recovery in India is shown by the growth of industrial profits, increase in the value of variable yield securities and *Capital's* index of industrial activity. The causes of our industrial recovery are mainly two: protection and Government patronage of Indian industries.

There is not much evidence of agricultural recovery. There has been some slight change for the better, but no marked rise in the prices of staples of export has taken place. India cannot rely on a growing foreign demand for her exports. The present situation is far from satisfactory, and the future of Indian agriculture is gloomy.

CHAPTER XVI.—ECONOMIC PLANNING, PAGE 382

Economic planning is winning adherents every where: "The present is characterized by planless control and regulation as the past was by planless freedom and individual choice; the future will be characterized by planned development of the economic system" (Sombart).

At the end of 1938 the Indian National Congress appointed a Planning Commission, which has started collecting statistical data. But real planning in India under existing conditions is impossible: (i) Economic planning without political power has little chance of success. (ii) A central authority is needed for planning. The Government of India is the proper planning and co-ordinating authority and the Government of India is not a responsible Government. (iii) It is extremely improbable that India will be allowed a free hand in fixing exchange at a lower rate or in further raising the tariff wall. (iv) Certain industries, e.g., ship-building cannot be developed without discriminating against British interests, which is not permitted by the Constitution Act. (v). Congress and non-Congress Provinces and the various political parties will not be easily persuaded to work

together. (vi) It is doubtful if India possesses a sufficient number of men with the requisite technical ability to evolve a plan and to execute it.

Planning in essence is the control and direction of the whole economic life of a country for the realisation of pre-determined aims, e.g., increase of production, abolition of unemployment, raising the standard of life of the people.

Planning is easy when the State owns all instruments of production and is the sole employer.

In Italy and Germany, private enterprise has not been abolished formally but it is subject to the severest regulation. In fact, private enterprise in Italy and Germany is not free—it is subject to 'a very advanced degree of government regimentation.' In Soviet Russia foreign trade is a State monopoly, but both in Italy and Germany nothing can be exported or imported without the permission of the State—there is both monetary and quantitative restriction of foreign trade. The State fixes all prices in Russia. But price determination is not left to the free play of competitive forces in Italy or Germany either. There is very little of free competition left in these Fascist countries, whether in agriculture or in industry.

The Corporate State in Italy. The Italian nation is regarded as an 'organism' with aims superior and more powerful than those of individuals or groups composing it. Italian fascism speaks of *laissez faire* or the old liberal outlook, with contempt. A new conception of the State has arisen, the State that is all-in-all.

It is evident that if a nation is to function as an 'organism' or a unity in the economic, moral and political sense, the entire life of the nation must be controlled and directed by a central authority. A vast organisation has been set up in Italy, in the form of the Corporate State, to regulate economic life.

The economic constitution of fascist Italy consists of four elements: syndicates, which may be called primary cells of the economic organism; federations, which are unions of syndicates; confederations, composed of federations as members; and Corporations, which are central unifying organisations. Above all, supervising the working of the whole economic hierarchy, is the Council of Corporations, with Mussolini as President.

Under fascism there is close co-operation between Government and the business world. As an economic system fascism may be described as a compromise between individualism and socialism. It is neither of the two completely, but it is something of both in parts.

Labour is a social duty in Italy and strikes and lock-outs are illegal. The Labour Court is the organ through which the State settles labour disputes.

Socialist Planning. The chief features of socialist planning are the following. The State owns and controls the means of production, including

land, and in consequence, the decision as to the quantity and quality of goods to be produced rests with the State or the planning machinery of the State. Competition is the chief regulator in the capitalist world, and the hope of profit its chief driving force. In a socialist economy the place of competition is taken by deliberate selection.

Those who plan production and those who direct the execution of the plan in a socialist economy must be men of the highest intelligence and character. Corruption and inefficiency in the socialist bureaucracy and impatience and lack of faith in the general public would be fatal to the success of socialist planning.

Economic planning is not patch-work. It must be comprehensive, embracing all fields of economic activity, the whole of production and the whole of distribution.

Economic planning cannot be sectional because economic life is not sectional. The various aspects of our economic life are so closely intertwined that a national plan of reconstruction cannot neglect any without deforming the whole structure.

Socialist planned economy is of a unitary character. In the domain of industry attention is concentrated on machine-making and development of the sources of power. In agriculture collective farming with power-driven appliances is the distinguishing feature. Production is on a large scale, or economic planning in the socialist State is on the basis of the machine, whether in agriculture or industries.

CHAPTER XVII.—CURRENCY AND EXCHANGE, PAGE 415

1835-1893. Before 1835 a great variety of gold and silver coins circulated in different parts of the country. No less than 27 varieties of rupees were current in Bengal. The circulation of several denominations of coins, whose value was constantly fluctuating, caused great inconvenience to the trading community. In 1835 the East India Co. made the silver rupee of 180 grains troy weight, 11/12 fine, the standard throughout British India.

In the same year, by the same Act, gold ceased to be legal tender. The coinage of gold, however, continued, and by a proclamation issued in 1841 public treasuries were authorised to receive gold coins. Gold tended to accumulate in public treasuries, and the proclamation of 1841 had to be withdrawn in 1852.

The fall in the price of gold consequent upon the discoveries of gold in Australia and California in 1849 increased the demand for a gold currency.

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Sir Charles Trevelyan supported this demand. The Secretary of State, however, was not in favour of making the sovereign legal tender, but he permitted public treasuries in 1864 to receive and pay out sovereigns and half sovereigns for ten and five rupees respectively; the rate was raised to Rs. 10-8 and Rs. 5-4 in 1868. Soon after the price of silver began to fall and the controversy regarding the introduction of a gold currency ended.

The fall in the price of silver was probably due to the appreciation of gold—gold production between 1873 and 1893 declined, while the demand for gold for industrial and monetary purposes increased. The fall in the gold value of the rupee (i) increased the burden of the Home Charges, (ii) tended to check the investment of foreign capital in India, (iii) lowered the gold value of the salaries, paid in rupees, of the European employees of the Government, and (iv) made foreign trade a gamble in exchange.

The fall in the gold value of the rupee, by itself, should have subsidized exports and penalised imports. But between 1873 and 1895 imports increased more rapidly than exports. This was due to the heavy fall in gold prices in this period.

1893-1925. Attempts to stabilize the price of silver by international agreements having failed, the Government of India, on the advice of the Herschell Committee, closed the mints to the free coinage of silver in 1893. The idea was to raise exchange to 16d. and to stabilize it at that rate by 'starving the circulation.' After falling to 12 5/8d. in January 1895 exchange gradually rose to about 16d. in 1898. The Fowler Committee re-examined the whole question in 1898. It recommended the adoption by India of the gold standard 'with its normal accompaniment' a gold currency. The sovereign was to be made legal tender at Rs. 15 and a mint was to be opened in India for the coinage of gold. Profits on rupee coinage were to be credited to a special reserve, called the Gold Standard Reserve, which was to be utilised for the maintenance of exchange. The Fowler Committee rejected Mr. Lindsay's plan, the Gold Exchange Standard.

Eventually, while the sovereign was made legal tender, no gold mint was established. Our currency system developed along the lines of the gold exchange system between 1907 and 1914.

An exchange crisis occurred in 1907-08 and in November of that year exchange fell below specie point. Exchange improved as soon as Government began to sell sterling bills on London and gave gold for export. Very little gold came out of circulation for export in the crisis. The chief lesson taught by the crisis was that for the maintenance of exchange it was essential to maintain a strong gold reserve and to know how to use it; gold in circulation was of little use for the purpose.

The Chamberlain Commission (1913) found that "It would not be to India's advantage to encourage the use of gold in the internal circulation."

They recommended that Government should make a public notification of their intention to sell sterling bills in India at 1s. 3 29/32d. whenever asked to do so to the full extent of their resources. The stability of exchange was thus to be guaranteed.

The rise in the price of silver during the war put an end to the gold exchange system. The rupee ceased to be a token coin. The increase in the cost of production of rupees compelled the Secretary of State to raise the price of rupees. A contributory cause of the rise in exchange was the strong demand for rupees abroad owing to the heavy balances of trade in India's favour.

When a silver token ceases to be a token coin, it may be made a token coin again by (i) a reduction in the weight or fineness of its silver contents or (ii) raising its gold value. The Babington Smith Committee of 1919 recommended the latter course. Government attempted to stabilize the rupee at 2s. gold in 1920, and later at 2s. sterling. But the attempt failed, in spite of the sale of Reverse bills to the amount of £55,000,000 in 1920, sometimes at rates very much higher than the market rate. The fall in exchange in 1920 was due to the heavy fall in the price of silver, as the rise during the war was due to the rise in the price of silver. A contributory cause of the fall was the adverse balance of trade in 1919-20 and 1920-21.

Exchange continued to fall till 1922. It began to rise in 1923, and the average rate in the first 9 months of 1925 was 18d. gold. England returned to the gold standard in 1925.

The Gold Bullion Standard. The chief feature of the gold bullion standard (recommended by the Hilton Young Commission of 1925) is the convertibility of token money directly into gold bullion for all purposes—in theory. In actual practice the rupee will be convertible into gold for export only. The rates for the sale of gold by the Reserve Bank will be so fixed as to make it unprofitable to demand gold from the Bank except for monetary purposes. If the exchanges are stable, the Reserve Bank will not be called upon either to buy or to sell gold. In fact, the gold reserves of a Central bank are not meant to satisfy the non-monetary demand for gold.

High currency authorities of the country submitted a Memorandum to the Hilton Young Commission in which they drew attention to the main defects of the pre-war currency and exchange system. Some of these defects were removable: (i) the rupee was linked to sterling only and the system ceased to be a gold exchange system as soon as sterling depreciated, (ii) Government were under no statutory obligation to sell gold or gold exchange at a fixed rate at a time of exchange weakness, and (iii) the currency and banking reserves were controlled by different authorities. But there were two other defects which could be remedied only by the adoption of the gold bullion

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or the gold currency standard: (1) the gold exchange system breaks down when the price of silver rises above the bullion par of the rupee, and (2) rupee circulation was not automatically reduced when Reverse bills were sold, but such decrease depended on the action of Government. It was argued in the Memorandum that the gold bullion standard was the ideal system, but that in India a full legal tender metallic currency was indispensable: "If therefore a gold currency is not introduced, defects in the Indian currency and exchange system must remain indefinitely." A practical scheme for the introduction of a gold currency standard by stages was outlined in the Memorandum. But the scheme was rejected by the Hilton Young Commission.

The 18d. Gold Rate. The Hilton Young Commission recommended the fixation of exchange at 18d. gold. The recommendation was given effect to in 1927. But, as is quite evident now, the rupee was considerably overvalued at this rate.

It is true that the gold value of Rs. 1500 at 16d. gold per rupee is equal to the gold value of Rs. 1333 at 18d. gold. But all values for the cultivator are not gold values (e.g., the price of bullocks, the water-rates and the land revenue, payment for the services of villiage menials). The extra Rs. 167 mean greater purchasing power for the cultivator.

It was thought that at 18d. gold Indian prices and costs had become adjusted to world prices and costs. That was the main argument of the Hilton Young Commission. But the Commission made no study of price fluctuations in the case of individual commodities. The Commission confined their examination to a study of index numbers of prices. Their examination showed that "from October 1924 to September 1925 there was a rapid and violent downward movement of the rupee price level which was not the reflection of any similar movement in world prices." But world gold prices did not remain stationary during this period. Prices in the United States in Sept. 1925 were the same as in January. But in 12 countries of Europe (including the United Kingdom) out of 14 there was a fall in gold prices. The explanation of the fall is 'increasing economic stagnation in most of the European countries' in contrast to the favourable conjuncture in the United States. Prices had been rising in 1924, and the rise was partly speculative. The fall of prices in 1925 was in some measure due to the reaction against inflated prices, and mainly to increased production.

The downward movement of Indian prices was in sympathy with the world gold prices. In these circumstances all talk of adjustment of rupee prices to the 18d. gold rate was meaningless.

Prices continued to fall after 1925, and the astonishing thing is that when we left the gold standard on Sept. 21, 1931, there was no rise of prices corresponding to the depreciation of the rupee in terms of gold. Prices did rise at first, but they fell again.

INDIA BEFORE AND SINCE THE CRISIS

It is admitted that England's return to the gold standard in 1925 was a mistake. We made a greater mistake in stabilizing the rupee at a rate higher than our pre-war gold parity.

At present India is under the sterling exchange standard, which will be turned into the gold exchange standard (or the gold bullion standard) when England returns to gold.

The £ is certain to be devalued. But it does not follow that devaluation that suits England must suit India. In currency matters we have been slavishly following England during the past 15 years. We have no currency policy of our own.

The Demand for the 16d. Ratio. The Government are determined to maintain the 16d. ratio. According to a Government communique (Dec. 16, 1938), 'a lowering in the ratio would do no good to any body except the moneyed and speculative interests.'

More fully, the official arguments against the lowering of the exchange ratio are the following:

- (1) It is far from certain that the currencies of the world have been so stabilized as to justify the proposed step.

It is not suggested that the rupee should be immediately stabilized in relation to gold at 16d. (=4.27 grains of gold); world political and economic conditions are not stable enough to justify devaluation of the rupee in this sense. But there is nothing in the prevailing instability, whether political or economic, to prevent us from lowering the sterling value of the rupee, if such a course is otherwise considered desirable or necessary.

- (2) It is doubtful whether devaluation would stimulate exports, or raise the prices of agricultural produce.

Assuming that prices remain as they are, a lower rate of exchange means a higher value in rupees for the same quantity of goods sold abroad. Unless other countries raise their tariff walls against us, a lower ratio would therefore tend to stimulate exports and increase our power of international competition.

- (3) The immediate prejudicial results are certain, viz.:

- (a) The consumer will suffer from a rise in the prices of imported goods, particularly cloth.

The sufferers will chiefly be town-dwellers and the middle-classes. People in villages do not largely consume imported goods. In regard to cloth, imports are of very little importance—they are about 10 per cent of the total consumption of cloth.

- (b) sterling liabilities will increase, in the case of the Punjab by 7 lakhs of rupees.

Assuming that the present value of exports from the Punjab is £9,000,000 (it is probably more than this), and assuming that sterling

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prices remain unchanged, the 16d. ratio would mean a gain of 150 lakhs to the Punjab. A great part of this increase would flow into the pockets of the cultivators. In any case the gain of the Punjab cultivator from a lower ratio would far exceed the loss to the Punjab Government. The same is true of the country generally.

- (c) There would be much speculation in exchange with consequent harm to trade and industry.

There is doubt and uncertainty about exchange now. Gold exports are dwindling and unless exports of merchandise increase miraculously it would be difficult to maintain the present rate, except by adding to the sterling debt and the dissipation of reserves. It would be better to end doubt and uncertainty by lowering exchange. Speculators would be active temporarily, but once exchange has been stabilized at 16d., normal conditions would be restored.

It cannot be denied that the rupee is over-valued. Present stability is spurious stability.

The 16d. ratio would increase the burden of the Home Charges by about 7 crores. The gain to the country would far exceed that sum, but the Government of India are naturally more concerned about their own loss.

An attempt should be made to reduce the Home Charges so that reversion to 16d. does not add much to their cost.

Attention may also be drawn to the action taken by certain countries. Australia and New Zealand have kept their exchanges about 20 per cent below sterling level and the French Franc stands lower today (177 to the £) than it did before England went off the gold standard 124 (to the £).

CHAPTER XVIII.—BANKING, PAGE 476

The Indian money market consists of indigenous as well as foreign elements. The village money lender, the private banker in towns and shroffs in the Presidency towns form the foundation of the Indian credit system. On this foundation there has been erected a Western superstructure of credit.

The Exchange Banks finance our export and import trade, besides doing ordinary banking business. They collect on maturity the bills drawn on Indian importers for goods purchased by them. With the proceeds of these bills and the deposits received by them in India, the Exchange Banks purchase the exporters' bills offered to them. They add to their funds by selling sterling to the Government.

The growth of Indian joint-stock banks has been rapid. But still the number of banks is inadequate for our needs.

The joint-stock banks used to keep very small cash reserves. The crisis of 1913 was due to lack of experience and partly to the attempt to finance industries with short-term deposits.

Directors of Indian banks have yet to learn that banks exist to assist trade and industry and not to finance the Directors and their concerns.

The village mahajan finances (i) agricultural operations, which is financing industry and (ii) trade, which is a commercial function. Hundis are used in the internal trade of India. A considerable portion of the business of Indian banks consists in making advances against Hundis. The shroffs in the Presidency towns purchase Hundis on their own account.

The Reserve Bank. Before the constitution of the Reserve Bank the Imperial Bank of India served as a kind of central bank. The Imperial Bank was founded in 1921 by amalgamating the three Presidency Banks.

The Reserve Bank commenced operations from 1st April 1935. The Bank is a shareholders' bank (the country would have preferred a State Bank), with a share capital of 5 crores, divided into fully paid-up shares of Rs. 100 each. The Central Board consists of a Governor and 2 Deputy Governors appointed by the Governor General in Council, 4 Directors nominated by the Governor General in Council, 8 Directors elected on behalf of the shareholders, and one Government official nominated by the Governor General in Council.

The Bank may purchase, sell and re-discount bills of exchange and promissory notes (a) drawn and payable in India, maturing within 90 days and arising out of *bona fide* commercial or trade transaction, (b) drawn and payable in India, maturing within 9 months, drawn or issued for the purpose of financing seasonal agricultural operations or the marketing of crops, and (c) drawn and payable in India, issued or drawn for the purpose of holding or trading in the securities of the Government of India, or a local Government, or specified securities of States. In each case one of the signatures must be that of a 'scheduled' bank.

The Bank may not (1) engage in trade or otherwise have a direct interest in any commercial, industrial or other undertaking, (2) purchase its own shares or the shares of any other bank or company or grant loans upon the security of any such shares, (3) advance money on mortgage of immovable property, (4) make unsecured loans or advances, (5) draw or accept bills payable otherwise than on demand, and (6) allow interest on deposits or current accounts.

The Bank has been entrusted with the management of public debt and with the issue of new loans. It has taken over the note issue from the Government of India. The Issue Department is wholly distinct from the

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Banking Department. Of the total amount of assets of the Issue Department, 40 per cent shall consist of gold coin, gold bullion or sterling securities. Of the assets in the form of gold or gold coin, 85 per cent shall be held in British India. The reserve requirements may be suspended temporarily on the payment of a tax by the Bank upon the amount by which the holding of gold coin, gold bullion and sterling securities is reduced below the prescribed minimum.

Every 'scheduled' bank shall maintain with the Reserve Bank a balance the amount of which shall not any day be less than 5 per cent of its demand liabilities and 2 per cent of its time liabilities in India. As a compensation for this obligation imposed on 'scheduled' banks, the Reserve Bank will rediscount bills of exchange and promissory notes only for the 'scheduled' banks.

The Bank will ordinarily only rediscount bills and promissory notes, but the power of direct discount, or open market operations, has not been withheld from it.

The rediscount facilities which the Bank provides are expected to impart a considerable measure of elasticity to the Indian credit system. In addition, the Bank is authorised to make loans and advances repayable on demand, or, within 90 days against the security of promissory notes of any 'scheduled' bank or provincial co-operative bank on certain conditions.

Indian joint-stock banks hold comparatively a small amount of bills. To encourage the use of bills the Banking Enquiry Committee recommended, among other things, a lowering of the stamp duty on bills, and standardization of customs governing the Hundis.

In regard to exchange, section 40 of the Reserve Bank Act imposes an obligation on the Reserve Bank to sell sterling at a rate not below 1s. 5 49/64d. per rupee. It is the duty of the Reserve Bank to prevent exchange from falling below the lower specie point.

Industrial Banking. In European countries there is a close relation between banks and industries. In India there are no industrial banks at all; the commercial banks do not provide finance for block capital, as a rule they finance trade. The banks do not possess technical knowledge necessary for valuing the assets of an industrial concern, and with their short-term deposits it is difficult for them to finance long-term industrial requirements. The Central Banking Enquiry Committee recommended the establishment in each province of a Provincial Industrial Corporation, with capital initially or permanently supplied by the Provincial Government. An all-India Corporation was also to be established to co-ordinate the work of Provincial Industrial Corporations.

Industries are at present largely financed through the managing agency system. The managing agents raise capital from their friends and others,

attract private deposits and take loans and cash credits from banks. In certain Provinces the system has worked well, but it is not free from defects. The Banking Enquiry Committee suggested that direct relations should be established between industrial companies and commercial banks.

External capital. No precise figures are available showing the total amount of foreign capital invested in India. The paid-up capital of companies registered outside India but working in India in 1934-35 was £586,000,000. Probably the total amount of foreign capital in India exceeds 1000 crores of rupees.

Under the existing political and economic conditions foreign capital cannot be kept out. The present policy is to make no discrimination between Indian and foreign capital except when Government grants concessions to an industry; when definite pecuniary assistance, such as a bounty is granted to any particular undertaking, it is required that (1) reasonable facilities should be provided for the training of Indians, and (2) in the case of a public company, that (i) it should be formed and registered under the Indian Companies Act of 1913, (ii) it should have a rupee capital, and (iii) a certain proportion of the Directors must be Indian.

CHAPTER XIX.—AGRICULTURAL CREDIT, PAGE 500

The establishment of agricultural banks was recommended by the Famine Commission of 1901. The *sawar* tended to grossly abuse his power.

The Co-operative Credit Societies Act was passed in 1904 and amended in 1912. The amended Act covered Co-operative societies established for production, distribution or other objects (i.e., non-credit societies), divided societies into those with limited and those with unlimited liability (agricultural societies as a general rule were to be with unlimited liability), permitted certain unlimited societies to distribute profits and made provision for the higher finance of the movement.

Our first registrar sought to promote two types of societies, the 'money-deposit type' which had no share capital but operated with fixed deposits, and the 'Mianwali type,' whose capital was raised by grain subscriptions. Both these types had eventually to be discarded. The type of society which became popular in the Punjab was one adapted from the Italian system: members become shareholders by payment of 10 compulsory annual instalments. No dividends are declared for 10 years when three-quarters of the profits are divided among the shareholders, the remaining fourth being transferred to the reserve fund.

Since 1904 the co-operative movement has made remarkable progress in

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the Punjab and India as a whole, but, so far, co-operation has touched only the fringe of the problem of indebtedness.

The Punjab leads the major Provinces, but even in the Punjab about 14 per cent of the rural population is affected by the co-operative movement.

Total loans and loan per member in the Punjab fell from 237 lakhs and Rs. 57 respectively in 1927-28 to 79 lakhs and Rs. 16 in 1932-33; in 1936-37 there was an increase in total loans to 97 lakhs and in loan per member to Rs. 19. These figures suggest that even co-operators are compelled to borrow from the mahajan.

Very useful work is being done by the co-operative department in the consolidation of holdings. The total area consolidated in the whole Province up to 31st July 1937 was about 800,000 acres. The advantages of consolidation are recognized and there is a brisk demand for consolidation even in villages where no propaganda has been carried on.

The Punjab possesses 12 land mortgage banks, but their work has come to a standstill, 'their only activities being the collection of their dues.' "Unless," says the Registrar, "the rise in values comes soon, the banks may have to face considerable losses."

The chief objects of land mortgage banks are (1) the redemption of land and houses of agriculturists, and the liquidation of old debts, (2) the improvement of land and methods of cultivation and the building of houses of agriculturists, and (3) the purchase of land in special cases.

Loans are granted for longer periods and of larger amounts than those made by ordinary co-operative credit societies.

In the case of land mortgage banks, as in that of ordinary credit societies, the problem of overdues is a serious one. The Reserve Bank insists on separating irrecoverable or frozen debt from the new business of societies. But co-operative societies are still waiting for 'the small turn of the wheel' which would enable borrowers to repay partially or in full what are regarded as 'bad debts.'

Reserve Bank Report on Agricultural Credit. A special department of the Reserve Bank is concerned with rural credit. A valuable report issued by this department in 1937 discussed the financing of agriculture. Drawing attention to the crushing burden of rural debt, the Report suggested that the debt must be reduced either in respect of the capital amount or the rate of interest, or both. Government should come to the assistance of both the debtor and the creditor. If the voluntary adjustment of capital and interest is supplemented by some form of direct or indirect Government assistance as regards payment, creditors generally will be prepared to accept very considerable reductions.

The Report made it clear that agricultural paper which represented the renewal of bad loans, coming through co-operative banks, would not be

discounted by the Reserve Bank. Agricultural debts must be so reduced that the agriculturist can pay them out of the profits of agriculture within, say, 20 years. The irrecoverable portion will have to be written off.

The following suggestions were made in the Report as to how co-operative societies should work in the future: (1) loans must be limited to cultivation finance, (2) there should be no over-financing or over-lending, (3) Loans which cannot be repaid in one year (e.g., for replacement of cattle) should not extend to say more than two years, and provision should be made for their repayment in equal instalments, (4) all loans must be issued in instalments as money is required, not in one lump sum, (5) immediate steps must be taken to recover loans due, unless there is a crop failure.

Farm Relief in Other Countries. In India generally, and particularly in the Punjab, attempts are being made to relieve agricultural indebtedness without spending a pie of Government money, or almost wholly at the cost of the creditor. In other countries 'the plans for the adjustment of debts have involved the Governments in financial operations often on a large scale'.

Sig. Costanzo divides the States into three groups: (1) States that have taken radical measures aiming directly at relieving the farmers from the burden of their debts, (2) States that have endeavoured to assist debtors without affecting the interests of creditors, and (3) States that have helped the debtors mainly by indirect means without violating the principle of respect for obligations incurred.

Radical measures 'have usually had results contrary to what was hoped from them.' Sig. Costanzo concludes that the results of drastic public interference in debtor and creditor relations are 'regrettable;' it is advisable to assist debtors 'without too greatly sacrificing the creditors'. He also considers it essential 'to go to the root of the evil', that is to raise agricultural prices to a remunerative level.

The following is a summary of measures of farm relief in different countries:

1. Reduction in capital debts (Bulgaria, Rumania, Yugoslavia, Brazil).
- (2) Reduction in interest (Germany, Italy, Switzerland and other countries).
- (3) Postponement of debts (Poland and many countries).
- (4) Conversion of short-term into long-term debts (Italy, Estonia and other countries).
- (5) Payment by instalments spread over a long term of years (many countries).
- (6) Protection against distraint (Germany and other countries).
- (7) State assistance in the form of loans (Italy, Denmark, Sweden, Latvia, South Africa, Australia, United States).

The Union of South Africa spent £33,000,000, on farm relief (which

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included the writing off the loans due by farmers to Co-operative credit societies). The Government of the United States spent much more. The Federal Land Banks in the United States issued farm loan bonds for the purpose of making new loans, or for purchasing mortgages, or for exchanging bonds for mortgages. Considerable sums of money were further provided by the State for re-financing any indebtedness of the farmer, for enabling him to redeem farm property, and other purposes.

In the Bhavnagar State, the State lent money at 4 per cent to the cultivators to enable them to pay off the debts settled by Conciliation Boards.

The Central Banking Enquiry Committee suggested the following scheme for dealing with indebtedness:

- (1) Debt reduction on a voluntary basis, the reduced amount to be paid in cash in a lump sum or by equated payments spread over a number of years.
- (2) Co-operative credit societies to be utilized as the agency for the payment to the lender of the settled debt.
- (3) The outstanding part of the settled debt to be treated as a deposit by the lender with the co-operative society, which will be paid to him in settled annual instalments.
- (4) Government to assist co-operative societies with necessary funds for payment of the settled amount in cash.
- (5) In cases where a society is subjected to loss on account of the failure of the borrower to pay his instalments, the Government should come to the assistance of the society.

Relief from indebtedness is only one aspect of the problem of farm relief. The small land-holder deserves relief from the heavy burden of taxation and the tenant cultivator from the heavy exactions of the non-working landlord.

CHAPTER XX.—AGRARIAN LEGISLATION OF THE PUNJAB GOVERNMENT, PAGE 533

This comprises the following Acts:

Regulation of Accounts Act 1930. Under this Act it is the duty of the creditor to record and maintain accounts in the manner prescribed by Government.

The Relief of Indebtedness Act, 1934. This Act (i) simplifies insolvency procedure, (ii) prescribes the maximum rates of

interest (on secured loans 12 per cent simple interest, and on unsecured loans $18\frac{3}{4}$ per cent simple interest), (iii) makes provision for the setting up of Debt Conciliation Boards, (iv) applies the principle of *damdupat* to agricultural loans.

Debtors' Protection Act, 1936. Under this Act the Deputy Commissioner is to determine how much of the land of a judgment debtor is to be attached and alienated and for what period, not exceeding 20 years.

The Punjab Agricultural Produce Marketing Act, 1938. This Act will create regulated markets for the sale of agricultural produce in which only licensed brokers, weighmen, measurers, surveyors, warehousemen and others will be allowed to work. Every market will be administered by a market committee. Two-thirds of the members of a market committee will be selected by the growers of the district.

Marketing legislation was long over-due. This is on account of the multiplicity of marketing functionaries and the unregulated state of their charges. The marketing charges are, *arhat*, *dalali*, *ḡarda* (excess weight deliverable by the seller), *palledari*, *dharmaḡda* (for charity), and other miscellaneous payments such as *bazar chaudhri*, *shagirdi*, *batta*, *muddat* etc.

In other parts of India regulated markets have been established under the Bombay Cotton Markets Act, 1927 and Hyderabad Agricultural Markets Act, 1929-30.

The 'Golden Bills.' This term is applied in official circles in the Punjab to four agrarian measures which have been placed on the Statute book:

- (1) *Amendment II to the Alienation of Land Act, 1901* declares *benami* transactions invalid. The person dispossessed can claim compensation for improvements, but not exceeding the value of the original transaction.
- (2) *Amendment III to the Alienation of Land Act* prevents the acquisition of the land of the debtor by the zamindar creditor in satisfaction of his claim.
- (3) *The Registration of Money-lenders' Act* requires all money-lenders to get themselves registered and to hold a license. A license may be cancelled for a specified period for specific reasons of fraud or dishonesty.
- (4) *The Restitution of Mortgaged Lands Act* extinguishes mortgages effected before the commencement of the Alienation of Land Act.

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The combined effect of these measures will be to restrict the supply of credit from non-agricultural sources and to hasten the process of 'swallowing up' of the smaller by the bigger agriculturists.

The statement made by the Punjab Premier in the Assembly that in certain districts of the Punjab, where there are the biggest zamindars, the smaller fish are swallowing up the bigger fish is without foundation. It is, in fact, nonsensical.

The investigations made by the Board of Economic Inquiry, Punjab, show that the expropriation of smaller owners is going on unchecked. Of course small owners will be found selling to small owners if small owners are defined as those owing up to 100 or 300 acres of land. The majority of landlords in the Punjab own less than 5 acres.

Further light on the expropriation of small owners is thrown by the rapid increase, specially since 1930-31, in transfers of land and by the increase in the percentage of the total area cultivated by tenants.

By selling his holding the small owner is set free for 'employment elsewhere.' But this 'employment elsewhere' is nowhere to be found.

Landlordism. For no particular services rendered to the land or his tenants, the landlord claims an excessive share in the produce of the land. Under existing conditions the tenant works almost entirely for the benefit of the landlord.

The landlord as an intermediary between the State and the tiller of the soil is largely a product of British rule. There were no such intermediaries under Akbar, and under the Sikhs, 'the idea of a middleman intercepting part of the collection was not for a moment entertained' (Steedman).

The State having called useless intermediaries into existence, may, at least, limit their demands.

CHAPTER XXI.—AGRARIAN LEGISLATION, OTHER PROVINCES,

PAGE 560

The caste-socialism of the Punjab Government turns a blind eye to the exploitation of tenants by the non-working landlord. But, as an exploiter, the non-working landlord is a greater evil than the money-lender.

Important legislation has been enacted in other Provinces, particularly Bihar and U. P., to safeguard the rights of tenants.

Bihar: The agrarian measures relating to the reform of the tenancy are: (1) The Bihar Tenancy (Amendment) Act, 1937, (2) The

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Chotta Nagpur Tenancy (Amendment) Act, 1938, (3) The Bihar Tenancy (Amendment) Act, 1938, (4) The Champaran Agrarian (Amendment) Act, 1938 and (5) The Bihar Restoration of Bakasht Lands and Reduction of Arrears of Rent Act, 1938. The tenant has been granted considerable relief through (a) rent reduction, (b) the acquisition of unrestricted right of transfer of occupancy holdings, (c) the grant of complete immunity against arrest and detention in civil prison in execution of a decree for rent and (d) restoration under certain conditions of land sold for arrears of rent.

United Provinces: A very comprehensive tenancy bill was introduced in the U. P. Assembly by Government in 1938. It contains provisions regarding *sir* (home-farm); devolution, transfer, extinction, merger, division and exchange of tenancies; determination and modification of rent; distraint; ejectment; arrears of revenue; and numerous other matters. According to landlords the bill would encourage tenants not to pay the rents due. The strongest opposition is to the clauses relating to *sir*. The bill seriously curtails the *sir* rights of landlords. *Sir* is a matter of considerable importance in U. P. It is not so important in the Punjab because landlords in the Punjab are not a distinct body, as in the United Provinces, from the body of tenant cultivators.

Madras: The Madras Agricultural Relief Act, 1938, makes provision for the scaling down of debts incurred before 1st Oct.~1932, and also for the total remission of arrears of rent under certain conditions.

Bombay: A Government bill of 1938 seeks to protect the interests of tenants as against landlords. A class of 'protected tenants' is to be created. The rent paid by such a tenant shall be 'reasonable'; facilities will also be given in regard to the payment of arrears of rent. As for tenants generally, it is proposed to abolish all cesses, taxes or other payments or services exacted by landlords other than the rent lawfully due.

CHAPTER XXII.—TAXATION, PAGE 577

The taxable capacity of a people is found by deducting from their total income from all sources the minimum amount required for consumption, for replacing old capital, and for new additions of capital. Minimum consumption does not mean bare subsistence; it must be interpreted as consumption necessary for efficiency.

It is almost impossible to make international comparisons of tax burdens, for the things we compare are not the same. In the case of England and

SUMMARY

India, (i) economic organisations of the two countries are different, (ii) the systems of taxation are different, (iii) the levels of income and prosperity are not the same—and this vitally affects tax-bearing power. Finally the burden of taxation also depends on such factors as (a) the objects on which the income of the State is largely spent and (b) whether the proceeds of taxation are spent in the country in which the taxes are raised or a considerable proportion is spent outside the country, as in the case of India.

There is also a further difficulty in the case of India—reliable data on the basis of which national income may be accurately estimated, do not exist.

The Income-tax. The substitution of the 'slab' for the 'step' system is an important measure of reform. Under the 'slab' system the first slice of income, Rs. 1,500 will be tax-free; on the next three successive slices of Rs. 3,500, 5,000 and 5,000 the rate of tax will be, respectively, 9 pies, 15 pies and 2 annas per rupee. The balance will be taxed at $2\frac{1}{2}$ annas per rupee. As a result of the introduction of this system the percentage of income taken will rise gradually throughout the whole range of incomes taxed (not by steps as under the 'step' system) and the upper grades of income will pay a higher percentage of income as tax than under the 'step' system.

In regard to the taxation of foreign income of residents in British India, the accrual basis has been substituted for the old remittance basis.

Rural Taxation. Water-Rates. The canals are a source of considerable net revenue to the Punjab Government.

The water-rates are a fixed and inelastic charge. Under existing conditions the charge is excessively high.

The water-rates are frankly levied as a tax. It is argued that not only those who take canal water (34 per cent of the population) but the rest of the population is entitled to benefit from the canals. But it does benefit from them. If the canals ceased to flow, no section of the population of the Punjab could escape serious injury.

The charge for water is at present determined with reference to the financial needs of the Province. This is a wrong principle. The water rates must be related to the degree of profitability of agriculture at the present time.

The Land Revenue. Is the land revenue a tax or a rent? Indian rulers recognised the right of property in land. The land revenue under Hindu or Muhammadan Kings was not a rent paid to the State-Landlord but a tax. But as a tax it was so heavy as to be equal to an extreme rent. Our British rulers mistook it for rent. The Indian Taxation Enquiry Committee (1924-25) rejected the theory of State Landlordism.

The Taxation Enquiry Committee drew attention to the serious defects of the land revenue system: (i) the incidence of the land revenue on

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different holdings varies greatly, (ii) there is no definite basis of assessment: it may be rentals or 'net assets', (iii) the rentals may be customary, controlled or assumed; the net assets may include or exclude the subsistence of the cultivator, (iv) viewed as a scheme of taxation, the land revenue 'is not only not progressive but actually tends in the opposite direction'; (v) only a very small proportion of the tax collected from the cultivator is used for rural development—in European countries the land tax is largely used for local purposes.

The Taxation Enquiry Committee made two definite suggestions, (1) the standard rate of assessment should not exceed 25 per cent of 'annual value', and (2) 'annual value' was to be interpreted to mean 'the gross produce less cost of production, including the value of the labour actually expended by the farmer and his family on the holding, and the return for enterprise'.

Land Revenue in the Punjab. In the Punjab the land revenue is treated, not as a tax on agricultural income but as the State's share in the net profits of cultivation, or 'net assets'. Net assets are defined as landlords' net assets, of which one-fourth is the State's share.

The calculation of the State's share on the kind rent basis is as follows. From the total estimated value of the gross produce of an assessment circle (assumed to be held by landlords), first menials' dues are deducted. Of what is left one-half is the landlords' share. From the landlords' share two further deductions are made, half water-rates and half cost of seed (Lyallpur District). To what is left half land revenue, *malikāna* and cesses are added (since these charges are paid half and half by landlord and tenant). The resulting sum is true landlords' net assets. The incidence per cultivated area is found by dividing the total land revenue (one-fourth of landlords' net assets thus calculated) by the figure of cultivated area.

According to law the average rate of incidence on the cultivated area shall not exceed the rate of incidence imposed at the last settlement by more than 25 per cent.

The definition of net assets as landlords' net assets assumes that peasant proprietors' net assets are identical with landlords' net assets. That would be so if the share left to tenants was sufficient to defray the tenants' cost of cultivation, including their wages and the normal return for enterprise. Under existing conditions this is emphatically not true. Peasant proprietors' net assets are identical with the economic rent of land, but landlords' net assets contain the tenants' subsistence. Landlords' net assets are therefore not the true economic rent of land. They contain a large element of loot and Government's land revenue is a share of this loot. It is unjust to tax peasant proprietors at a rate derived from landlords' net assets.

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Net assets should be defined as profits on direct cultivation. If net assets were so defined, the peasant proprietor's wages and normal return for enterprise would have to be included in costs of cultivation. Costs would absorb about 75-80 per cent of the value of gross produce. The Lyallpur assessment shows that under the indirect definition of net assets the allowance for costs is 56 per cent of the value of gross produce.

The Sliding Scale. Under the old system revenue rates were fixed in accordance with average prices of agricultural produce over a long period (the preceding 20 years) and it was assumed that there would be no large variation in prices throughout the period of the settlement. Under this system the peasant stood to gain when the average level of prices rose above the prices assumed for assessment purposes.

The recent heavy fall of prices made the old system unworkable. For it was found that the average prices of the preceding 20 years were 55 per cent higher than actual prices at the recent assessment of the Lyallpur district.

Under the sliding scale the standard demand is still calculated according to the assumed commutation prices which are much higher than actual prices, but remissions will be granted every year. In granting remissions three factors will be taken into account, (i) the percentage of the total matured area under each important crop, (ii) the average yield per acre of each of those crops, and (iii) the commutation price assumed for each of those crops. From year to year there is not likely to be any material change in the first two factors and thus the amount of the remission will be solely determined by the percentage fall of prices as compared with the commutation prices.

The sliding scale fully safeguards Government land revenue receipts. But it will work against the peasant proprietor. It is in fact a clever device for taxing the subsistence of the peasant proprietor while deceiving him with limitless paper remissions. The objections to the sliding scale from the point of view of the peasant proprietor are the following: (1) The sliding scale assumes that the zamindar always enjoys net assets, provided that the fall in prices is not exactly 100 per cent. But if the price of wheat, for example, fell by 80 per cent, would the cultivation of wheat show any net assets at all? (2) When prices fall heavily, net assets may wholly vanish. This is because costs never fall in the same proportion as prices. Government know it very well. The water-rates are never reduced according to the fall in prices.

The result of the comparative inelasticity of costs is that net assets fall in a heavier proportion than prices. Unless remissions are granted according to the fall in net assets (i.e., after taking the variation in costs into account), the sliding scale is no boon to the working peasant. When prices fall, the peasant proprietor, after enjoying heavy remissions (according to the difference

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between the commutation prices and actual prices) will ordinarily pay substantially more than 25 per cent of his net assets, and when prices fall heavily, he will pay more than 100 per cent of his net assets.

Further, and this is the most important objection to the sliding scale, the calculation of the standard demand in the sliding scale is based, not on actual but prospective net assets. The sliding scale tears up the Government of India's famous Resolution on Land Revenue Policy of 1902 as 'a scrap of paper'.

CHAPTER XXIII.—INDIAN FINANCE, PAGE 618

The study of Indian finance since 1913-14 may be divided into three periods: (1) Pre-Reform, 1913-14 to 1920-21, (2) Reforms Period, 1921-22 to 1935-36 and (3) Era of Provincial Autonomy since 1936-37.

Pre-Reform Finance. This includes the War period. Between 1913-14 and 1920-21 Indian revenue increased from 128 crores to 215 crores (68%) and expenditure from 124 crores to 241 crores (94%).

There was little increase in land revenue receipts. But the Customs revenue increased from 11 $\frac{1}{3}$ crores to 32 crores and the yield of the Income-Tax from 3 crores to over 22 crores in this period. Military expenditure increased from about 30 crores to 87 $\frac{1}{2}$ crores. The greater part of the increase in military expenditure took place after the Great War had ended.

Reforms Period, 1921-22 to 1935-36. The Montague-Chelmsford Reforms led to important financial changes in the relations between the Centre and the Provinces. The divided heads of revenue and expenditure were abolished. Land revenue, irrigation, stamps and excise were made wholly Provincial and the income-tax wholly Imperial. As a result of this change a large deficit in the Indian budget was anticipated. This was made good by Provincial contributions (983 lakhs in 1921-22), which were gradually reduced and finally abolished in 1928-29.

The Reforms period began inauspiciously. The deficits, in fact, had started much earlier, in 1918-19, and ended only with the year 1923-24. The deficits were met by the issue of fiduciary currency. A Retrenchment Committee appointed in 1922 recommended heavy cuts in expenditure, and there were additions to taxation. A surplus was realised in 1923-24 and thereafter, till the advent of the trade depression, there were only minor changes in the tax system. The financial situation before the trade depres-

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sion could be described as eminently satisfactory. Financial stability had been attained in spite of heavy sacrifice of revenue on the part of the Government of India (cotton excise $1\frac{3}{4}$ crores, opium $1\frac{1}{2}$ crores, import duty on machinery 85 lakhs, and Provincial Contributions about 10 crores).

The effects of the trade depression were felt in the budgets for 1929-30 and 1930-31, but the full effects became apparent only at the end of Sept. 1931, when a supplementary budget, covering the whole year 1932-33, and proposing heavy additions to the burden of taxation, had to be introduced. Financial stability was regained and the budgets for 1933-34, 1934-35 and 1935-36 were balanced with only minor changes in the tax system.

Era of Provincial Autonomy since 1936-37. The financial situation again became 'disquieting'. For 1936-37 a surplus of 205 lakhs was estimated, but the revised estimates showed a deficit of 197 lakhs. A deficit was anticipated also in 1937-38. The 'disquieting' factors were three: (i) the restriction of rural credit caused by indebtedness, (ii) increase of silver imports at the cost of imports of goods subject to a higher rate of duty and (iii) diminishing returns from the Customs tariff. Still the Finance Member saw no reason 'why the Niemeyer prognostications should not be realised in the long run'. The Niemeyer programme could be fulfilled by a modest addition to the resources of the Centre of Rs. $1\frac{1}{2}$ to Rs. $1\frac{3}{4}$ crores. This money was found by increasing the sugar excise and raising the import duty on silver from 2 annas to 7 annas per oz.

The distribution of income-tax receipts under the Niemeyer Award began in 1937-38. There was no addition to tax-burdens in 1938-39. In the budget for 1939-40 increased revenue was obtained by doubling the import duty on raw cotton and the substitution of the 'slab' system for the 'step' system in income-taxation.

CHAPTER XXIV.—PROVINCIAL FINANCE, PAGE 639

Sir Otto Niemeyer reviewed 'the present and prospective budgetary position' of the Central and Provincial Governments before the inauguration of Provincial Autonomy. On the whole he took a favourable view of the financial situation. Given prudent management of finances, he thought that adequate arrangements could be made to meet the financial implications of the new constitution.

Certain Provinces needed assistance. Irrespective of the allocation of taxes on income, Sir Otto recommended assistance to the Provinces amounting to 450 lakhs annually. The separation of Sind benefited Bombay to the extent of about 90 lakhs annually; by the separation of Orissa, Madras

obtained annual relief amounting to 20 lakhs and Bihar about 8 lakhs. Further, Sir Otto recommended the cancellation of all debt contracted with the Centre, prior to 1st April 1936, of the following Provinces: Bengal, Bihar, Assam, N.-W. F. P. and Orissa. In the case of C. P. about 2 crores of pre-Reform debt was cancelled. The jute-producing Provinces were already receiving 50 per cent of the net produce of the Jute Export Duty. Sir Otto recommended an increase of $12\frac{1}{2}$ in their share.

The Income-Tax. Of the total receipts amounting to about 16 crores in 1936-37 from all forms of income-tax (including Corporation Tax) Sir Otto fixed 12 crores as the amount divisible between the Centre and the Provinces. Of this 6 crores is to go to the Provinces, but for five years the Centre may retain in any year out of the 50 per cent share of the divisible income-tax receipts the whole or such sum as is necessary to bring the 50 per cent share accruing to the Centre, together with any General Budget receipts from the Railways, up to 13 crores, whichever is less. The distribution of the income-tax among the Provinces has begun.

The Punjab was gravely dissatisfied with the Niemeyer Award. The Punjab Government calculated that out of recent and immediate relief amounting to 822 lakhs, the share of the Punjab was 1·7 lakhs, or one-fifth of one per cent; out of a total relief estimated at 14,22 lakhs at the end of ten years, the Punjab would get 49·7 lakhs, or 3·5 per cent.

The Punjab vigorously protested against the Award, but without avail.

Working of Provincial Autonomy. The general conclusions on the working of Provincial Autonomy may be summarised as follows:

1. In a technical sense the aim of the Niemeyer Report and Award has been achieved. The state of chronic deficit in which certain Provinces had fallen has been ended; financial stability in the case of all Provinces attained; their resources have materially increased, and they have started their career as autonomous entities on an 'even keel'.

2. There is no major Province in which increased spending power is not being utilised for the expansion of constructive, nation-building activities. This is true both of the Congress and non-Congress Provinces. In every Province there is a keen desire to promote the well-being of the rural masses and to augment the sources of wealth-production in order to increase the income of the people. This task is being attempted in each Province within the limits of the resources of the Province.

3. But very little has been done to reduce the burden of rural taxation. The remissions in land revenue, where they have been granted, are inadequate. It is remarkable that in spite of the heavy fall of prices since 1928-29, which has made cultivation over a large part of the country unprofitable, the total amount of land revenue realised in the Provinces at

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the present time is about the same as in the pre-depression year 1928-29 (over 27 crores).

4. While the attempt to increase the income of the people by the improvement of agriculture and the marketing of agricultural produce deserves all praise, the main source of the agriculturist's income is the prices at which his crops are sold, and prices are beyond the control of Provincial Governments.

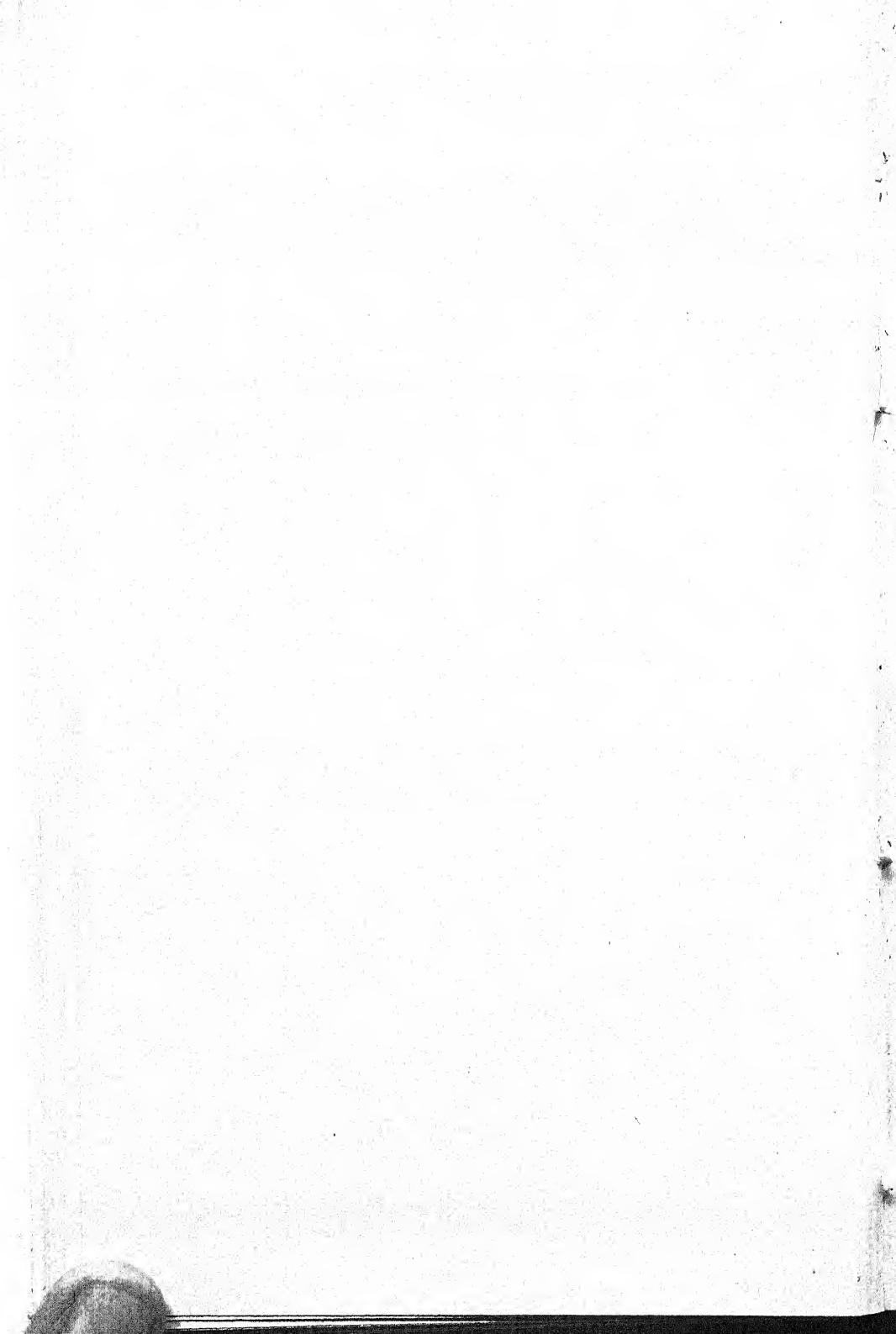
5. Cottage industries are being promoted in all Provinces, but they have little chance of survival in competition with machine industries. The development of factory industries depends on conditions determined by the Government of India.

6. The problem of indebtedness of the peasantry remains unsolved. The action taken in certain Provinces, e.g. the Punjab, is tending to destroy the foundations of rural credit.

7. There is no Province which could not usefully increase its expenditure on nation-building activities, in relieving indebtedness, and in reducing the burden of rural taxation. But no important new sources of revenue have been discovered. The main existing sources of Provincial revenues are largely rigid and inelastic.

8. Expenditure, like revenue, is largely inelastic—the scope for retrenchments being very restricted.

9. Democracy has both a pleasant and an unpleasant aspect. Provincial Autonomy in certain Provinces is a direct cause of growing communal tension. The cost of legislative bodies has materially increased. What the Provinces require is cheaper administration. So far as the good of the people is concerned, it is doubtful if the present Unionist or a future Congress Government in the Punjab, under the existing economic system, would be able to do more for the people in the next fifty or hundred years than what the irresponsible bureaucratic administration achieved in 30 years in pre-Reform days. The only satisfaction that we now have is that we are governing ourselves. But it is government under conditions which bar real progress.



INTRODUCTION

Ten years ago, in the Introduction to *Indian Economic Life, Past and Present*, I wrote:

“Indian economics is a misleading term, and there would be advantage in abandoning its use altogether. It was introduced by writers who supposed that the principles of economics, as they are taught in the West, did not apply to Indian conditions. The economic organisation of an agricultural country must be different from that of an industrial country, but the motives to economic activity are the same everywhere. If economics is a study of mankind in the ordinary business of life, as it claims to be, and if the motives which lead men to engage in the production of wealth in India are the same as in Western countries, a study of facts of Indian economic life cannot be expected to reveal the existence of entirely new laws governing the production, exchange, distribution or consumption of wealth. No such laws have been discovered. There is thus no science of ‘Indian economics’ as apart from the science of general economics. Indian economics is a study of Indian economic life (facts as well as problems) in the light of our knowledge of the general principles of economics”.

The term ‘Indian economics’ is still used. But it is now generally recognised that ‘Indian economics’ is no separate science but a study of Indian economic facts and problems. It is thus a part of the study of Indian economic history. The present work is ‘Indian economics’ in this sense.

A study of facts of Indian economy is of the greatest importance to us in our present stage of political and economic development. The constitutional changes have, in the provincial sphere, given considerable power to Indian Ministers, which they are expected to use to re-adjust the burden of taxation, increase national income and wealth, and raise the standard of living of the masses.

Many of the problems which confront us are intricate. And very often it is necessary to study the world situation in order to understand economic changes in India.

The world crisis of 1929 is a good example. The prices of food-grains and raw materials have fallen heavily, with disastrous effects on our whole economy. Why? Will prices rise again?

And if so, will they remain stable at the pre-crisis level? Exports of wheat have declined heavily and exports of cotton are dwindling. Why? Is there hope of permanent recovery in exports? India was traditionally known as a sink of the precious metals, and we imported gold on a considerable scale in the first thirty years of the present century. Why was the tide reversed in 1931, and why are we still exporting gold? Or consider the price of gold. From Rs. 21-4 per tola in August 1931 it has risen to more than Rs. 37. Why has the price of gold risen? Is it likely to rise further? Or will it fall to the old level? The question is of more than ordinary interest, for if there were good reasons to believe that in a few years gold will be selling in India at Rs. 21-4 again, great profit is to be made by selling gold now and buying it later at the lower price.

Exchange is a technical subject but of vital importance to every Indian manufacturer and every Indian cultivator. An exchange controversy is raging in the country. It is an old controversy, which started with the unsuccessful attempt of the Government to fix exchange at 2s. gold in 1920. The 2s. gold rate and the 18*d.* gold rate have vanished, but the 18*d.* sterling rate is being maintained with grim determination. Should exchange be lowered to 16*d.*? Indian Chambers of Commerce are united in their demand for the 16*d.* ratio. The same demand has been put forward in the name of the Indian cultivator. But a *communiqué* issued by the Government of India on 16th December 1938 declared that a lowering in the ratio 'would do no good to anybody except the moneyed and speculative interests in India'. . . . Eight major provinces recently made a representation to the Government of India in favour of the lower ratio, but the Punjab kept aloof, on the ground, among others, that 'It is far from certain that the currencies of the world have been so stabilised as to justify the proposed step.' Is the demand for a lower sterling ratio a demand for fixed devaluation of the rupee in terms of gold? Again, is it true that a lower exchange ratio would benefit no one except the Indian moneyed and speculative interests? Is it a matter of complete indifference to the cultivator whether he receives more or fewer rupees for the same amount of produce sold at the same sterling price? Are all values under the gold standard gold values and under the sterling standard sterling values? How far would the cultivator be hit by a rise in

the prices of imported goods? Would the foreign manufacturer be able to raise the price of his cloth by $12\frac{1}{2}$ per cent, under existing conditions of Indian mill competition, if exchange fell to 16d.?

We may discuss the ratio question in the light of world experience. Why did Australia and New Zealand depreciate their currency 20 per cent below sterling? Why is France maintaining her Franc at a level below that of 1928? Why is England maintaining the value of sterling in terms of the dollar below the pre-war level? Has our power of international competition increased so enormously since the crisis of 1929 that we may maintain our exchange at $12\frac{1}{2}$ per cent above the pre-war level? What is the bearing of mechanical and biological progress relating to agriculture in Western countries on our power of international competition?

These are important questions having a connection with wealth production and wealth consumption in India. They deserve the attention of not only students and teachers of economics but members of legislative bodies and public leaders, whatever the political party to which they owe allegiance.

Agrarian legislation of a highly controversial nature has been enacted in the Punjab, and in appraising it we are assisted by a study of measures of farm relief in other countries.

In the Punjab, Government expects economists to advocate radical measures of farm relief, e.g. the complete cancellation of debts. A foreign writer, Sig. Costanzo, who has made a thorough study of debt legislation in different countries, reaches the conclusion that the results of drastic public interference in debtor and creditor relations are 'regrettable' and a wiser course is to adopt measures 'that respect contractual obligations and protect the distressed debtor without too greatly sacrificing the creditors'. Which of the two is right, Sig. Costanzo, who speaks on the basis of world experience, or the Punjab Government who, in their socialist (!) zeal, seem to have developed a supreme contempt for facts?

In regard to the rate of interest, is it possible to control it by merely passing decrees, the supply of and the demand for capital remaining unchanged? Can fraud and dishonesty in money-lending transactions be checked by threats of the severest penalties? Or was the great communist and friend and collaborator of Karl Marx, Friedrich Engels, right when he said that the rate of interest would,

all the other social conditions remaining unchanged, 'continue to be governed by the economic laws to which it is subject today, despite all decrees', and that the only difference made by penalising decrees is that financiers are 'very careful to advance money only to persons from whom no subsequent court proceedings might be expected.'[†] What would be the probable results, for the cultivator, of the destruction or weakening of the existing agencies of rural credit when neither the Government nor co-operative societies seem able or willing to meet all requirements of the rural borrower?

Sometimes responsible Ministers of Government make not only misleading but actually incorrect statements. For example, the Premier of the Punjab informed the Punjab Assembly on July 8, 1938 that statistics collected by Government in Shahpur, Jhang and Multan showed that big zamindars were gradually selling their land to small zamindars, thus reversing the old saying that big fish eat small fish! The statement was greeted with applause, even when it was not only contrary to common sense, but in contradiction of the facts collected by Government. Such statements would be made with less confidence and received more critically if the public were better informed.

Land revenue is another technical subject the study of which has been entirely neglected by public leaders. The result is the framing of demands which Government can, without much difficulty, show to be wrong. For example, the demand has been put forward from many peasant platforms that land revenue be levied according to income-tax principles. Drawing their inspiration from this demand the Government Land Revenue Committee (Chairman Sir Malcolm Darling) phrased their first question thus:

"The assessment of income-tax is based on a *yearly* estimate of the net profits of every assessee.

"Is it practicable to estimate each year, and therefore each harvest, the net assets of each land revenue payer?"

The answer, of course, is in the negative. What the peasant proprietor really wants is the abolition of land revenue and the taxation of agricultural income according to income-tax principles. 'Net assets' of land revenue and 'net income' of the income-tax are two different things. It is possible to replace the land revenue

[†]*The Housing Question*, p. 38 (Martin Lawrence publishers).

by an agricultural income-tax; it is impossible to apply income-tax principles to 'net assets'.

If the land revenue is not to be abolished, then the greatest importance attaches to a change in the definition of 'net assets'. It is again the general ignorance of the public that enables Government to mislead the people. Government want no change. The present indirect definition of net assets suits non-working landlords who govern us.

It is essential for peasant leaders in the Punjab Assembly and outside it to understand the difference between a direct and an indirect definition of 'net assets'. It is all the difference between just and unjust taxation of the worker.

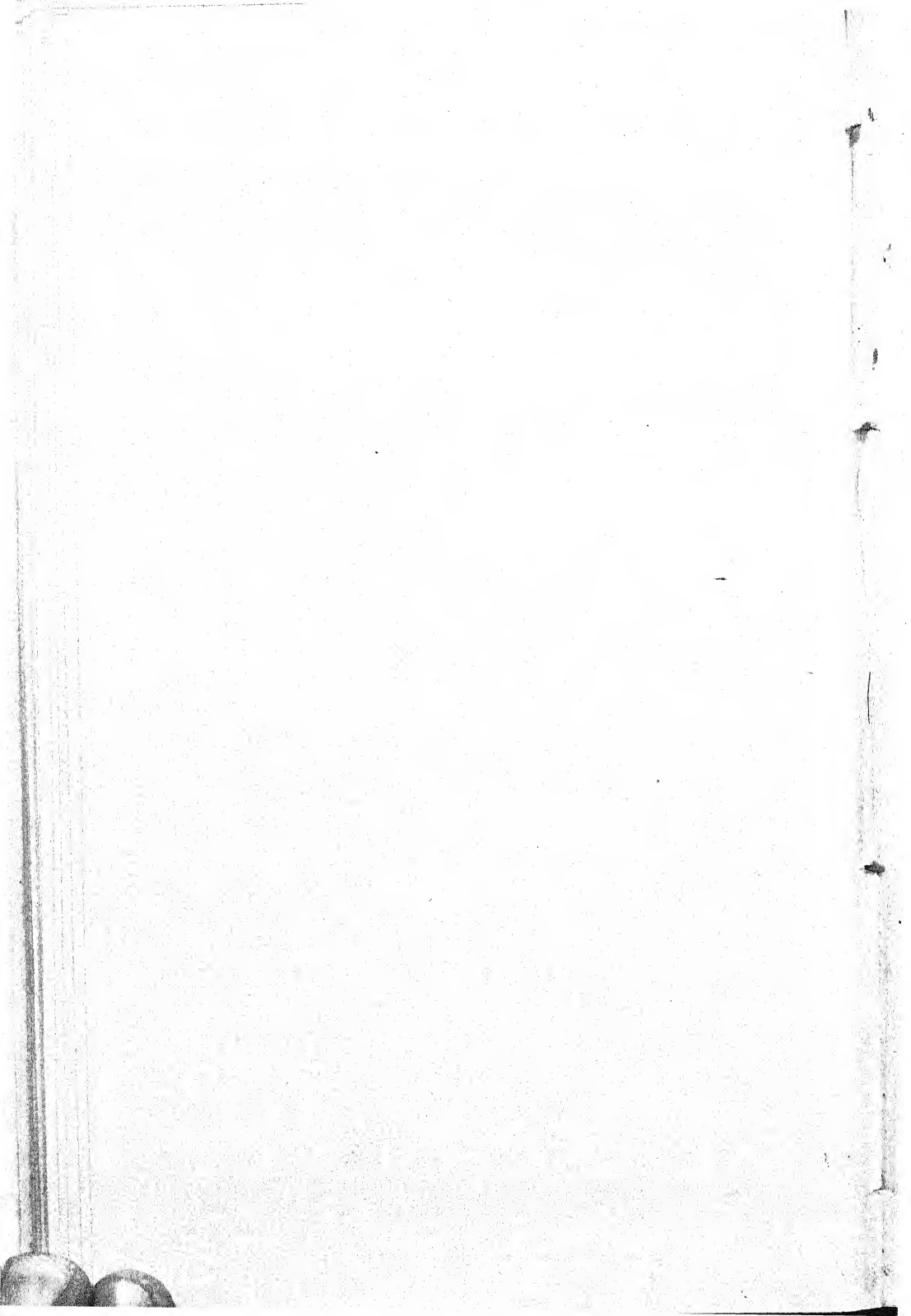
Not merely Punjab but all-India leaders would gain by a study of economic history, past and present, of India and other countries.

In the preface to *India Before the Crisis* I said: 'Unfortunately the gravity of the economic situation is not sufficiently realised either by officials or non-officials. Our leaders would talk less about *gur*, *charḱha* and *ḱhaddar* if they had any perception of the gigantic forces released by scientific progress in recent years'.

What has been the fate of the *charḱha* in competition with machinery in other countries? What has been our own experience during the past 100 years? India is rapidly becoming self-sufficient in regard to cotton cloth. Is this result due to the *charḱha* or the progress of the mill industry? Suppose we build our future economy on the basis of hand-power—Mahatma Gandhi is sincerely and irreconcilably opposed to machinery. Will it mean greater production of wealth, lower prices, and a higher standard of well-being for the masses?

Unfortunately, English being the medium of instruction, no economics is taught in schools. Economics is not an exact science and, perhaps, considering the disagreement among the leading economists on such fundamental concepts as value, it is not a science at all. But it is a subject of profound interest to all those concerned with public affairs.

A wide diffusion of economic knowledge through the medium of our own languages would not only bring enlightenment to the masses but serve as a powerful antidote to communalism. For economic laws work out their effects irrespective of distinctions of caste or creed.



THE POPULATION OF INDIA

CHAPTER I

AREA AND DISTRIBUTION

India has an area of 1,809,000 sq. miles, of which British India covers 1,096,000 sq. miles and Indian States and Agencies 712,000 sq. miles. The mean density of the whole of India in 1931 was 195 (176 in 1921 and 174 in 1911), that of British India 248 and of States and Agencies 114.

The population of India is about 353 millions (1931). This is a little more than one-sixth of the total estimated population of the world:

POPULATION OF THE WORLD (1931)¹.

			Millions.
Africa	..	..	143·4
America	..	..	255·4
Asia	..	..	1,105·4
Europe	..	..	510·4
Oceania	..	..	9·9
<hr/>			
World Total	..	..	2,024·5

Dr. Hutton in the Indian Census Report for 1931 gives 1,850,000,000 as an estimate.² But the League figure of about 2,000 millions seems more reliable.

Dr. Hutton thus refers to our present population.

“The population now even exceeds the latest estimate of the population of China, so that India now heads the lists of all the countries in the world in the number of her inhabitants.”³

¹ *Statistical Year-Book of the League of Nations, for 1932-33.*

² Vol. I, p. 5.

³ Vol. I, p. 29.

It is doubtful whether we enjoy that distinction. The Census Commissioner relies on Prof. Willcox's estimate (342 millions) of the population of the whole of China (including Tibet, Mongolia, Chinese Turkistan and Manchuria). The figure adopted by the Statistical Year-Book of the League of Nations is 450 millions, which is about 100 millions more than the population of India. In the notes to the population statistics it is pointed out that estimates of the population of China by competent authorities vary considerably. But according to the census reports of Chinese Provincial Governments in 1928 and 1929, completed by estimates made by the Ministry of the Interior and by the Geographical Society of Wchang, the population is about 453 millions, and the estimates published by the Chinese Maritime Customs Service are higher still.⁴ If these official Chinese estimates are even approximately correct, China, of all countries, has still the largest number of inhabitants.

DENSITY ACCORDING TO ADMINISTRATIVE DIVISIONS

The mean density of population gives no idea of the actual distribution of population in a country.

Among the major Provinces, Bengal has a density of 646 to the sq. mile, and Burma has only 63. Next to Bengal, in the order of density, comes the United Provinces with 456 persons to the sq. mile, closely followed by Bihar and Orissa with a density of 454. The thinly peopled provinces are Central Provinces and Berar (density 155), Assam (157), the Bombay Presidency (177), and the North-West Frontier Province (179). The Punjab has a density of 238 and Madras of 328 to the sq. mile (see Table 1).

There are extreme variations in density in States and Agencies. Cochin State has 814 persons to the sq. mile as compared with Jammu and Kashmir's 43 and Beluchistan States' 5. Among the larger States, the most densely inhabited is Baroda (299 persons to the sq. mile); Mysore has a density of 224, Hyderabad 175, and Gwalior 134.

⁴ *Statistical Year-Book of the League of Nations*, 1932-33, p. 25. Note on China.

AREA AND DISTRIBUTION

Great variations in density are found even within these political divisions. In Bengal the Dacca Division has a mean density of 935 persons, but Lohajang *thana* shows a rural density of over 3000 per sq. mile, and the Munshiganj sub-division has a mean density of 2,413. In a village of Cochin State there are actually 4,000 persons to the sq. mile.

In the Punjab, of the five political divisions, Multan has the lowest (160) and Lahore the highest density (481). Of the Districts, Dera Ghazi Khan has only 56 persons to the sq. mile as compared with Jullundur's 713, Amritsar's 711, and Lahore's 527.

DENSITY ACCORDING TO NATURAL DIVISIONS

Sir Edward Gait, the Census Commissioner for 1911, divided India into 16 Natural Divisions on the basis of rainfall. The statement given below shows the Natural Divisions in their order of density:—

		Density per sq. mile.	Mean annual rainfall in inches.
I.	Bengal	534	76
II.	Behar and United Provinces East	526	47
III.	Madras South-East ..	386	39
IV.	Malabar and Konkan ..	382	101
V.	United Provinces West, and Punjab East and North ..	274	34
VI.	Orissa and Madras Coast, North ..	225	50
VII.	The Deccan	169	30
VIII.	Gujrat	153	24
IX.	Central India East, Central Pro- vinces and Berar, and Chhota Nagpur	136	47
X.	Rajputana East and Central India West	131	25
XI.	Assam	115	92
XII.	Lower Burma	80	146
XIII.	The North-West Dry Area ..	72	10
XIV.	Upper Burma	39	48
XV.	Kashmere	37	24
XVI.	Baluchistan	6	8

It would have been interesting to learn how the population of India and density had varied according to Natural Divisions since 1911, but the Census Commissioner for 1921, thought it "unnecessary to present the statistics of India as a whole in any scheme of natural divisions," and so also did the Census Commissioner for 1931.

This information is, however, available for the Provinces separately, and it is of great interest as showing the relative importance of the causes determining density in India. We shall take two examples, the United Provinces and the Punjab.

In the United Provinces the natural division enjoying the heaviest rainfall is that called Himalayan West. It comprises the Districts of Dehra Dun, Nainital, Almora and Garhwal. The normal annual rainfall, in inches, varies from 57.81 (Garhwal) to 84.91 Dehra Dun. But the average density of this natural division is the lowest—109 to the sq. mile. The explanation lies in the configuration of the land. The districts are hilly, and the percentage of culturable to total area is low (12.7).

The natural division of heaviest density is Indo-Gangetic Plain, East, with 753 persons to the sq. mile. It comprises the districts of Benares, Jaunpur, Ghazipur, Ballia, and Azamgarh. The average annual rainfall exceeds 40 inches, and the proportion of culturable to total area is 84.6 per cent. This division can support more inhabitants than Himalayan West, though it has much less rainfall, because it is a plain. Indo-Gangetic Plain, West, has a density of 542, or less than that of the Eastern plain because it has less average annual rainfall, though it has a higher percentage of gross cultivated area which is irrigated (30.5 per cent as compared with 27.5 per cent for Indo-Gangetic Plain, East).

It is evident that rainfall alone does not determine density. Hills and forests reduce the population in proportion to area. Where, however, there are no hills and forests and irrigation is not very important, density will be found to vary according to rainfall. The most densely populated regions of India are Cochin, Eastern Bengal, the north-east of the United Provinces and Bihar, and they receive more rainfall than any other part of India except Assam and

AREA AND DISTRIBUTION

Southern Burma, where a considerable proportion of the area is covered with hills and forests.⁵

IRRIGATION AS A FACTOR AFFECTING DENSITY

As in the United Provinces, so in the Punjab the natural division with the lowest density (83) is Himalayan. This includes Simla, where density is heavy (460) on account of the inclusion of a large urban area. The average rainfall received by the Himalayan division is over 62 inches. The North-west Dry Area supports 130 persons per sq. mile, while its annual average rainfall is only 9.31.

The North-west Dry Area includes districts where density is heavy though the rainfall is scanty. This is due to irrigation.

The influence of irrigation as a factor in determining density is shown by the fact that the district of Lyallpur, with an annual rainfall of 12 inches, has a density of 368 per square mile. In 1891, before irrigation started, Lyallpur had only 7 inhabitants to the square mile. The canals were opened in 1892 and by 1901 the district had a population of 187 to the square mile. The density rose to 272 in 1911, 301 in 1921 and 368 in 1931.

In those parts of the Punjab where crops mainly depend on the supply of water by artificial means (canal or well irrigation), rainfall has practically no effect in determining the incidence of the

⁵ "The most densely peopled tract in India, a *taluk* in the Cochin State with 1,920 persons to the square mile, has the heaviest and most regular rainfall, and, conversely, the scantiest population is found in the almost rainless regions of Jaisalmer. The proverbs of the people confirm what appears to be the teaching of statistics. They say in Marwar, where emigration and the breaking up of families under the stress of famine have left a deep impression upon popular speech,—

'August's here, no sound of thunder,
Sky is clear, and weather fine:
Wife! 'tis time for us to sunder,
You to your folk, I to mine.'

And this is only one instance, no doubt a specially intimate and pathetic one, of countless apothegms on a subject which touches the very life of the Indian peasant. It is true that the relation between rainfall and population is not always so direct and tangible as in the thirsty steppes of Western Rajputana. In Burma the maximum density does not correspond with the most copious rainfall, and some of the wettest tracts are conspicuous for their scanty population." (*Census of India, 1901 Report Vol. I, p. 3*).

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population on cultivation. This is well brought out by the following table:—

Districts with over 70 per cent of matured crops irrigated (1921).	Incidence on cultivated area.	Rainfall Inches.	Canal Irrigation.	Well irrigation.
Amritsar ..	670	24	40	30
Muzaffargarh	568	6	53	24
Jhang ..	482	10	58	28
Lahore ..	472	18	56	22
Gujranwala ..	443	23	55	21
Multan ..	442	7	73	14
Montgomery	430	10	64	23
Lyallpur ..	417	13	97	1
Shahpur ..	365	15	64	11

It will be seen that the incidence does not vary as the rainfall. For example, the incidence is heavier in Muzaffargarh than in Jhang, though Jhang has more rainfall, and so on. The incidence is heavier in Amritsar than in Muzaffargarh, but not in any proportion to the rainfall in the two places.

Where, however, irrigation is of less importance, the incidence on cultivation varies according to the rainfall. This is shown by the following table:—

Districts with less than 28 per cent of matured crops irrigated (1921).	Incidence on cultivated area.	Rainfall Inches.	Irrigation.
Kangra ..	984	74	20
Simla ..	972	63	0
Hoshiarpur ..	831	35	11
Gurdaspur ..	652	34	28
Rawalpindi ..	538	32	2
Ambala ..	522	32	6
Jhelum ..	443	26	5
Gurgaon ..	407	25	17
Rohtak ..	398	20	27
Attock ..	340	20	9
Mianwali ..	361	12	12
* Hissar ..	196	16	16

The exceptional case of Hissar is explained by the fact that it lies on the border of Rajputana and the land of the district is of poor, sandy quality.⁶

⁶ *Punjab Census Report, 1921, p. 24, et. seq.*

AREA AND DISTRIBUTION

More recent figures, showing the relative importance of irrigation and rainfall in determining density are given below:—

District.	Mean density per sq. mile in 1931.	Percentage of irrigated area on gross cultivated area.	Average rainfall in inches.
Sialkot ..	622	48	31·83
Gurdaspur ..	526	29	34·41
Hoshiarpur ..	475	11	29·90
Gujrat ..	410	45	26·84
Rawalpindi ..	314	2	37·17
Jhelum ..	195	3	26·90
Montgomery ..	226	95	9·57
Lyallpur ..	368	96	11·99
Dera Ghazi Khan ..	56	52	5·67

In Rawalpindi and Jhelum irrigation is of no importance and density is determined by rainfall. Sialkot can support more inhabitants than Gurdaspur because it has a larger proportion of irrigated area, though less annual rainfall than Gurdaspur. Dera Ghazi Khan is sparsely populated because it receives very little rainfall, and only a little more than half of the gross cultivated area is irrigated.

DENSITY OF POPULATION IN EUROPE

“In former times,” says Conrad, “the growth of numbers was chiefly determined by the productiveness of land. The growth of civilization, which implies mastery over nature in a higher degree, and the development of industry and trade, make it possible to become independent of agricultural conditions, and cause a heavy density of population also in places poorly endowed by nature. The great increase of population among modern civilized peoples is due to the growth of trade and industry.”*

The growth of population in the leading countries of Europe in recent times has, as we shall see, been far more rapid than in

* *Statistik, erster Teil*, p. 81.

INDIA BEFORE AND SINCE THE CRISIS

India. As regards density of population the following statement is instructive:—

DENSITY PER SQUARE MILE

India.	East Prussia.	Sweden.	Westphalia.
1872 148	1871 135	1871 440	1871 225
1921 177	1919 150	1919 805	1919 575

England & Wales.	France.	Sweden.	Spain.
1871 389	1872 177	1872 23	1871 85
1921 650	1921 184	1920 36	1920 109

The increase in density in the industrial districts of Germany may be contrasted with the almost stationary conditions in East Prussia. In England and Wales density per square mile increased by 260 in 50 years. In France the growth of numbers, for reasons which are well known, is very slow. The very considerable increase in the density of the population in certain parts of Germany and England and Wales is mainly due to the development of trade and industry in these countries.

The Statistical Year-Book of the League of Nations for 1932-33 gives the area in sq. kilometres and the population for different countries, from which density of population can be easily calculated. As compared with India's average density of 75 per sq. kilometre, Australia has a density of less than 1, Canada 1, U.S.S.R. 8, Norway 9, Sweden 14, Egypt 15, United States of America 16, and Soviet Russia, European territory 22. The density of population in France, 74, is about equal to that of India, 75. Countries with the heaviest density are the following:—

	Density per sq. kilometre.		
Belgium	272
Holland	241
United Kingdom	190
Japan	171
Germany	138
Italy	134
Czechoslovakia	106
Switzerland	100

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It is obvious that Belgium can support 707, Holland 627 and the United Kingdom 494 persons per sq. mile only with the aid of a highly developed industrial system. In these and other European countries a much higher proportion of the population is supported by industries than in India (see Table 3). 36 per cent of the population of Holland depends for its livelihood on industry, and about 40 per cent each in England and Wales and Belgium. In England and Wales agriculture supports about 7 per cent of the population as compared with 71 per cent (or more) in India.

With the growth of industries there was a decrease, both in absolute numbers and relatively to the total population, in the agricultural population of Germany.

The total number of persons dependent on agriculture, fishing and hunting in Germany decreased from 19.2 millions in 1882 to 17.7 millions in 1907—from 42.5 per cent of the total population to 28.6 per cent. During the same period, those dependent upon mining and industry increased from 16.1 millions (35.5 per cent of the total population) to 26.4 millions (42.8 per cent) and those dependent upon trade and transport, from 4.5 millions to 8.3 millions (from 10.0 per cent of the total population to 13.4 per cent).

Between 1895 and 1913 imports into Germany increased from 4,246 to 10,700 million Marks and exports from Germany from 3,424 to 10,096 million Marks. These figures, says Waltershausen, show "the important share of Germany in world economy."* During this period Germany was becoming an industrial country, which may be inferred from the increase in the exports of manufactured goods, and in the imports of raw materials. Germany was, however, able to avoid the one-sided development of a country like England, which enabled her to resist the Allies for more than four years, though she was cut off from the rest of the world.

* *Deutsche Wirtschaftsgeschichte 1815-1914*, p. 461.

The development of German industries was at the expense of agriculture, and of cottage industries. We have already seen that there has been an absolute decrease in the numbers supported by agriculture in Germany; as regards her cottage industries it is significant that in 1907, while 90 per cent of the total number of businesses were small businesses (employing 1—5 persons), these businesses gave employment to only 29·1 per cent of the total number of workers. The large businesses (employing more than 50 persons), 1·3 per cent of the total number of businesses, employed 47·7 per cent of the workers.

It has been well said that “The history of cottage industries is the history of capitalism.” The decay of cottage industries is undoubtedly due to the rise of capitalism. There is no branch of handwork which has not been affected by capitalism in the leading European countries.

It should be clear that industrial development (even when cottage industries and agriculture are declining), enables a country to support a larger population, and at a higher level of comfort than agriculture alone.

INDUSTRIES IN INDIA

We have seen that the density of population in India varies according to agricultural conditions, as determined by rainfall, irrigation and the configuration of land. We have cottage industries and also important factory industries, but they exercise a negligible influence on the density of population. The main support of the population is pasture and agriculture.

The following table shows the number and proportion of earners and working dependents engaged in pasture and agriculture and industries:—

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TABLE A

1931

Earners and working dependents in 1000 (both sexes).

	Total.	Exploitation of Animals and Vegeta- tion.	Industry.	Propor- tion % of Col. 3 to total (Col. 2).	Propor- tion % of Industry to total.
India ..	153,886	103,295	15,353	67.1	10.0
Provinces ..	116,317	78,188	11,636	67.2	10.0
Assam ..	3,878	3,252	292	83.8	7.5
Bengal ..	14,420	9,857	1,269	68.3	8.8
Bihar & Orissa	15,548	12,059	1,030	77.6	6.6
Bombay ..	8,511	5,592	1,016	65.9	11.9
Burma ..	6,210	4,322	665	69.4	10.7
Central Provin- ces & Berar	8,259	6,658	656	80.6	7.9
Madras ..	25,904	12,591	2,269	48.6	8.8
N.-W. F. P.	858	529	108	61.7	12.6
Punjab ..	8,327	5,040	2,568	60.5	18.8
U. P. ..	23,550	17,862	2,630	75.4	11.2

In India as a whole as well as in the Provinces the proportion of earners and working dependents supported by Industry to the total is 10 per cent. The proportion varies in different provinces, from 7.5 per cent in Assam to 18.8 per cent in the Punjab.

Earners and working dependents do not represent the entire population. There are also non-working dependents to be taken into account. According to the Census Commissioner for 1931, 11 per cent of the entire population is dependent on Industry. The proportion of the population dependent on agriculture is considerably more than 67 per cent, which is the percentage of agricultural earners and working dependents to the total number of workers and earning dependents.

The Punjab is not an industrial province. As shown by Table B, excepting Assam and the N. W. F. Province, it has the smallest number of factory employees (49,549) in British India, and yet of all the Provinces it shows the largest proportion of earners and working dependents supported by Industry. What is the explanation of this riddle?

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Most of those engaged in Industry in the Punjab, as in other Provinces, are cottage workers. Factory industries support less than 1 per cent of the population. About 10 per cent of the population is supported by cottage industries.

The figures in Table A above only mean that the Punjab has more cottage workers relatively to her population than other provinces.

The following table compares male earners in certain industries in Bombay and the Punjab:—

TABLE B

Male earners in certain industries in Bombay and the Punjab in 1000

Order.		Bombay.	Punjab.
5.	Textiles ..	297	271
6.	Hides and skins ..	13	11
7.	Wood ..	82	154
8.	Metals ..	35	76
9.	Ceramics ..	39	107
10.	Chemical products ..	16	38
11.	Food industries ..	26	49
12.	Industries of dress and the toilet ..	152	341
14.	Building industries ..	54	33
17.	Miscellaneous and undefined ..	66	165
Of which:			
Group 98.	Makers of ornaments and jewellery ..	39	46
Group 100.	Scavenging ..	17	109
TOTAL ..		780	1,245

(Source: *Census of India, 1931, Vol. II, Occupation Tables*).

In 1930, the Punjab had only 10 textile factories as compared with Bombay's 222, but the number of male workers in textile industries in the Punjab was not much less than that for Bombay. The Punjab has more hand-weavers than Bombay.

AREA AND DISTRIBUTION

Industries of dress and the toilet are mostly unorganised industries. They give employment to more than twice as many workers in the Punjab as in Bombay. A group included under Order 17, "Miscellaneous and undefined" is 'scavenging.' The Punjab has more than six times as many scavengers as Bombay. This is all the significance of the higher proportion of industrial workers in the Punjab (18.8 per cent) as compared with Bombay (11.9 per cent) and Bengal (8.8 per cent).

PRESSURE ON AGRICULTURE

Where the population is mainly dependent on agriculture, where Industry supports a comparatively negligible proportion of the population, and where even that proportion tends to decline, it is obvious that with the growth of numbers the pressure on the soil must increase, unless the agricultural resources of the country are expanding at a more rapid rate than the population.

Between 1921 and 1931 the density per square mile increased from 225 to 248 in British India, and the population increased by ten per cent. But the net area sown with crops was practically stationary.

NET AREA SOWN WITH CROPS IN BRITISH INDIA

Year.	Million Acres.	Year.	Million Acres.
1911-12	.. 216	1921-22	.. 223
1912-13	.. 224	1922-23	.. 225
1913-14	.. 219	1923-24	.. 222
1914-15	.. 228	1924-25	.. 227
1915-16	.. 222	1925-26	.. 226
1916-17	.. 230	1926-27	.. 226
1917-18	.. 228	1927-28	.. 224
1918-19	.. 201	1928-29	.. 228
1919-20	.. 223	1929-30	.. 228
1920-21	.. 212	1930-31	.. 229
<hr/>		<hr/>	
Average 1911-12 to		Average 1921-22 to	
1920-21: ..	220	1930-31: ..	226

The net area sown fluctuates from year to year according to seasonal conditions. For example, it fell from 228 million acres in 1917-18 to 201 million acres in 1918-19. The decade ending

in 1931 was favourable to crops and the acreage sown with crops fluctuated about the normal level. The average for 1921-22 to 1930-31 was, however, only 3 per cent greater than that for the preceding decade.

The progress of agriculture did not keep pace with the growth of numbers in the decade 1921-31.

Under such conditions the land can support larger numbers only on the assumption that the cultivators accommodate themselves to a lower standard of living. That must happen, particularly when agricultural prices fall heavily as they have done.

The pressure on the soil is more severe in some provinces than in others. It is undoubtedly severest in two provinces: Bihar and Orissa and the United Provinces.

Per agricultural worker, both male and female ("total earners' principal occupation") there were in 1930-31 2.5 acres actually sown with crops in the United Provinces and 2.1 acres in Bihar and Orissa.

Among the Provinces and States which lose by migration the United Provinces and Bihar and Orissa are the most important. In 1921-31, the United Provinces lost 975,000 and Bihar and Orissa 1,568,000 persons through emigration.

The emigrants from Bihar and Orissa chiefly go to Bengal and Assam. The Census Commissioner for Bihar and Orissa, 1931, says:

"The extent of the migration from Bihar and Orissa to Bengal may be gauged from the fact that, home-loving and firmly rooted in the soil as its people are, one person out of every 30 born in the province was found to be residing in Bengal when the present census was taken."⁷ And Bihar and Orissa supply the tea industry of Assam with about twice as many labourers as all the rest of India put together.

The emigrants from the United Provinces leave their Province to seek their fortunes in Bengal, Assam and Burma in the east, Punjab and Delhi in the west, and Bombay, Central India Agency, and the Central Provinces and Berar in the south. Mr. Turner,

⁷ Report, p. 111.

AREA AND DISTRIBUTION

Census Commissioner for the United Provinces, 1931, draws attention to the increase, by 200,000 since 1921, in the loss of males through emigration, but does not regret it. He calls the outlet that emigration provides a "blessing";

"The pressure of the population on the soil in this province is severe, and growing heavier year by year. There has been no widespread complaint of shortage of agricultural labour at any time during the past decade, and since the fall in prices of agricultural produce labour has been surplus to requirements in the rural areas. Industrialists in this province have experienced no difficulty in securing all the labour they required, and in fact the development of industries has been far too slow to absorb the surplus labour resulting from a rapidly increasing population and a lessened demand for agricultural labour. As the industries of the province develop there is little doubt that labour will cease to emigrate from the province in view of the inborn dislike of the average Indian of travelling far from his home village."⁸

WHY PEOPLE EMIGRATE

Mr. Turner looks upon emigration from the United Provinces as a 'blessing' since it relieves the pressure on the soil. His predecessor Mr. Edye took a different view.

Mr. Edye contended "that density determined the percentage of gross cultivated to cultivable area," and stated that "under present conditions the density will continue to increase, so far as its increase is not checked by disease, until the limit is reached beyond which the percentage cannot expand." He held that the figures of density in relation to the percentage of gross cultivated to cultivable area showed "that the percentage is still capable of expansion even in the most congested divisions,"* and that the limit had not yet been reached in any part of the Province, except perhaps in the lands surrounding Farrukhabad City.

On the subject of migration from the United Provinces Mr. Edye wrote:

"It is remarkable that in spite of the greatly increased demand for labour in this Province that has been witnessed during the decade,

⁸ Report for United Provinces, 1931, p. 201.

* Report, 1921, p. 17.

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the number of emigrants has not decreased appreciably. This fact bears out what must be the impression of anyone who has acted as an Emigration Officer under the Emigration Act, as the writer did for several years—that emigrants generally leave their homes not to better their prospects but to escape domestic unpleasantness.”

Mr. Edye's conclusions differ in certain respect from those of his predecessor, Mr. Blunt, Census Superintendent in 1911. Mr. Blunt regarded the figures of cultivable area as misleading, for all the area shown as cultivable is not really such. As regards the Eastern district he wrote:—

“The pressure on the land has long been considerable in these tracts, and must still be very great, though plague has ruthlessly relieved it.”†

And again:—

“There were signs ten years ago that the most densely inhabited tract in the Province, the Eastern Plain and the Eastern Sub-Himalayas, were beginning to seriously feel the pressure of the population on them; but the pressure is relieved, not by internal emigration to other parts of the Province, but by emigration to the east, to Bengal and Assam, and it was the growth of this emigration which showed that the tract was getting overpopulated. But the pressure now is far less than it was ten years ago, for plague has proved a terrible though effective adjunct to emigration in relieving it.”*

That people who are attached to their home and soil emigrate on account of domestic unpleasantness, and not to better their prospects, seems absurd when we keep the economic conditions in Bihar and Orissa and the United Provinces in view. Perhaps domestic unpleasantness itself is caused by unfavourable economic conditions and growing poverty.

Messrs. Risley and Gait, Census Commissioners for India, 1901, had no doubt that there were certain localities, chiefly in parts of Bihar and in the east of the United Provinces, “where the pressure on the soil is already felt,” but they hoped that scientific farming would increase the produce of the land, so that

† Report, 1911, p. 49.

* Report 1911, p. 49.

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"room would be made for an even greater population."⁹ They also said that it could be plainly argued "that the dense population of certain parts of Bihar is only rendered possible by the readiness of the people to go on reducing their standard of living rather than tempt fortune by emigrating in search of spare land."¹⁰

These hopes entertained in 1901 have not been realised. Pressure on the soil has been relieved not by scientific farming or the progress of agriculture but in part by continuous emigration and chiefly by the hand of death. The population of the United Provinces decreased by 1·1 per cent in 1901-11, and 3·1 per cent in 1911-21; that of Bihar and Orissa increased by 3·8 per cent in 1901-11 but decreased by 1·4 per cent in 1911-21. In the last decade, 1921-31, the population of the United Provinces increased by 6·7 per cent and that of Bihar and Orissa by no less than 10·8 per cent. The Indian cultivator has a remarkable capacity for reducing his standard of living, and living practically on nothing, but even then there is little doubt that pressure on the soil will be relieved in the coming years (as happened in 1911-21) by famine and epidemics.

SUMMARY

The position regarding the pressure on agricultural resources in the different provinces is summarised below in the light of the census reports.

UNITED PROVINCES

"A considerable body of agriculturists" in the Indo-Gangetic Plain, Central and East and Sub-Himalaya East "cannot make ends meet on the proceeds of their cultivation";¹¹ a large proportion of tenants have holdings below the average. In 1929, 54 per cent of the tenants were found indebted. The proportion must have risen since then, for the collapse in agricultural prices "must

⁹ Report, 1901, Vol. I, pp. 86-7.

¹⁰ Report, 1901, Vol. I, p. 4.

¹¹ U. P. Report, Vol. I (1931), p. 46.

have wiped out the reserves of many of the tenants and smaller landlords."¹² The possessions of the ordinary peasant consist in a little land, a pair of bullocks and seed for the next crop, and bare necessities, i.e., "the clothes he stands up in," cooking utensils and an unsaleable house. Bullocks are often sold after ploughing and re-purchased later. "In many cases even seed has to be borrowed for sowing."

"What are the possible remedies"? asks the Census Commissioner.

We have already seen that emigration as an outlet for surplus numbers is a 'blessing.' Other suggested remedies are (a) development of subsidiary industries such as rope-making, weaving, spinning, blanket-weaving, etc., and (b) growing more of the money-making crops, e.g., cotton and sugarcane.

The pressure on the soil cannot be alleviated by breaking up fresh soil, for "there is very little fresh soil available in the province, especially in those areas where it is most required."¹³

The peasant may borrow less for unproductive purposes, and he may borrow at a lower rate of interest. But there is not much scope for saving through a fall in the standard of living: "The cultivator's standard of comfort being already miserably low, it is wholly impossible to suggest that he should reduce his expenditure on his own personal needs and those of his family or of his animals."¹⁴

BIHAR AND ORISSA

In 1921-31 there was no material addition to the natural resources of the province. On the contrary, the proportion of the total area under cultivation in 1931 was slightly smaller than in 1921. "Nor can it be asserted that the yield per acre of the soil has been increased to any great extent by new and improved methods of exploitation."¹⁵ Agriculture is there to support the growing

¹² *Ibid.*, p. 48.

¹³ *Ibid.*, p. 48.

¹⁴ *Ibid.*, p. 48.

¹⁵ *Report, 1931*, p. 72.

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population. Are there any other resources? "Practically none,"¹⁶ says the Census Commissioner. A very gloomy outlook for this unfortunate province, one must say.

What is the remedy, then? The Census Commissioner can only suggest that the agriculturist should learn to do without the "'luxuries' to which he has grown accustomed of late," that he should "cut his coat according to his cloth"¹⁷—which in more plain language means, that he must reconcile himself to a fall in his standard of living, low as it already is. The population "would appear to be exceptionally vulnerable," *i.e.*, an attack of famine followed by epidemics would take a heavy toll of life.

The outward flow of emigration is expected to "receive a fresh impetus."

CENTRAL PROVINCES AND BERAR

The situation in this province is more favourable. There is no acute pressure of population in any part of the Province. Except in Berar and some of the Chhatisgarh States hardly more than 50 per cent of the cultivable area is actually under cultivation, "but yet in spite of the heavy increase of population since 1921 there is no appreciable change in the net area cultivated."¹⁸

It is thought that the time is still far distant when the law of decreasing returns would come into operation in this province. It is also pointed out that there is still room for the extension of cultivated area in many tracts. Valuable crops other than cotton can be grown, and improved and intensive methods of agriculture adopted. Finally, the development of industries, "which has recently been occupying the attention of many leading politicians" may be expected to provide suitable occupation for a larger proportion of the population.

¹⁶ *Ibid.*, p. 72.

¹⁷ *Ibid.*, p. 75.

¹⁸ *Report*, 1931, p. 63.

INDIA BEFORE AND SINCE THE CRISIS

BOMBAY

As a result of the trade depression "numbers have been forced back on the land."¹⁹ In consequence pressure on the land has increased: "A greater burden than ever is being thrown on agriculture as a source of livelihood." The decade 1921-31 witnessed "no great new sources of wealth." The effects of the Lloyd Barrage at Sukkur in increasing prosperity will not become noticeable for many years; the result is that the increase of population "is temporarily an embarrassment."

What is the solution?

Organised industries must be developed: "in the future industry on organised lines must become increasingly important and increasingly necessary for the well-being of the community." But that is a slow process. "The solution must be for a time a tightening of the belt, which means a slight lowering in the standards of comfort to which the present generation has become accustomed." The Census Commissioner expects that adjustment will take place by a slowing down of the rate of increase; therefore the full effects of the growth in 1921-31 would be better estimated in 1941.

MADRAS

"Over much of the rural tracts of the Presidency the land is supporting as many people as under the present conditions it can without an alteration in standards."²⁰ The saturation point has been reached in certain parts, with centres at Pudukkottai and Musiri. "Other adjoining areas are in the position that a strong and continuing emigration flow is necessary to maintain population level of subsistence."

The Census Commissioner takes an optimistic view of the possibilities of industrial development, and in this development lies the chief hope of improvement. "Possibilities of agriculture on present methods have more or less reached a maximum, and the

¹⁹ Report, 1931, p. 24.

²⁰ Report, 1931, p. 46.

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Presidency can no longer feed itself."²¹ The Census Commissioner also hopes that as the standard of living rises, the rate of growth of numbers will slow down "as has happened elsewhere." He forgets that social and other conditions in India are not the same as 'elsewhere,' and that very grave doubts may be entertained regarding the possibility of a rise in the standard of living in the coming years—such rise at any rate as would automatically lead to a fall in the birth-rate.

BENGAL

Net area sown in Bengal in 1930-31 was only 2·6 acres per cultivator, taking males and females together ('total earners principal occupation'). It may therefore be thought that pressure on agriculture in this province is sufficiently heavy. But the Census Commissioner thinks that the possibilities of agricultural improvement in Bengal are so great that Bengal could support at its present standard of living a population very nearly twice as large as that recorded in 1931 (50 millions).²² Bengal agriculture can thus support 100 millions without a fall in the standard of living—irrespective of the fall of prices, and of the dwindling demand for jute! How does the Census Commissioner reach this remarkable conclusion? Of the total cultivable area only 67 per cent is now actually under cultivation. Suppose the whole of the area is brought under cultivation, and yield per acre increases 30 per cent, then the simple rule of three ($\frac{100}{67} \times \frac{130}{100} = 1·94$), gives the result stated.

The Census Commissioner forgets that theoretical conclusions, based on the simple rule of three, may be difficult to realise in actual practice. First, it may be doubted if the whole of the area which is described as cultivable but is at present not cultivated, is actually cultivable. Secondly, considering the financial resources of the ryot, the adoption of intensive methods of cultivation is not so easy as one may imagine. Thirdly, the collapse of agriculture

²¹ *Ibid.*, p. 47.

²² *Report*, 1931, p. 63.

prices, the growth of substitutes for jute, and the whole situation created by the agricultural revolution in the West have the same unpleasant meaning for the cultivator in the Bengal as in other provinces. The Bengal cultivator must tighten his belt as cultivators are doing elsewhere.

As regards the voluntary limitation of births, the Census Commissioner recognises that it is impossible under existing conditions. Such methods are repugnant to common sentiment in India, and are too expensive so far as the great majority of the people are concerned. But in the West fertility is found to decrease with the increase of wealth and intellectual interests. The Census Commissioner, on the analogy of the West, expects that as the death rate declines in India (which is the object of public health measures) there will be a corresponding decrease in the birth rate with the improvement of the standard of living, an increase in the spread of education, and a further emancipation of women and the abolition of the *purdah* system.²³ His argument is unconvincing. The analogy of Western Europe cannot be accepted without such important reservations as make it thoroughly useless. How long shall we take to educate the whole population, and to change their religious mentality? Is the standard of living tending to rise or fall as the result of the recent economic changes?

PUNJAB

As compared with the 14 per cent increase in population, the number of cultivators (workers) increased 21·7 per cent. It is probable that the population dependent on agriculture has increased by even a larger percentage. Referring to the "very big increase in the already numerous category of cultivators" the Census Commissioner says:

"The other resources of the Province are obviously not keeping pace with the rate of increase in the population."²⁴

²³ Report, 1931, p. 65.

²⁴ Report, 1931, pp. 221-22.

NORTH-WEST FRONTIER PROVINCE

For its economic development, the N.-W. F. Province does not depend on its own resources. Being an "All-India" as well as an Imperial responsibility, it is liberally assisted with funds by the Government of India. "The wealth expended in this small corner of India has in fact been out of all proportion to the local means of production." But on account of financial stringency, the grants may be on a reduced scale in the future. There are also moral objections to the dependence of a community on another for means of subsistence.²⁵ The N.-W.F. Province must learn to stand on its own economic legs.

The economic position is not reassuring. Industries are declining. The decline is not due to the general trade depression. "Rather it is due to increased activity in trade, for imports of factory-made articles from Hindustan and other parts of the world are destroying the markets which local products used to enjoy."²⁶ The textile industry has suffered most from machine-competition.

Agriculture is the main existing source of wealth, but it "has almost reached the limit of its expansion."²⁷ The strain on the agriculturist increased in the last decade (1921-31).

ASSAM

Assam gains by migration. The gain amounted to 78,000 in 1901—11,412,000 in 1911—21, and 122,000 in 1921—31. The percentage of foreign born persons in Assam in 1931 was 15.2. The major provinces which contribute to the population of Assam in the order of their importance are Bengal, Bihar and Orissa, Central Provinces, United Provinces and Madras.

There is room for growth of numbers in this province: "Except in a few places there is still little pressure of population on the soil which year after year brings forth abundant harvests with little toil."²⁸

²⁵ *Report*, 1931, p. 33.

²⁶ *Ibid.*, p. 122.

²⁷ *Ibid.*, p. 33.

²⁸ *Report*, 1931, p. 31.

Disease is the most important check on the growth of numbers, "and of disease," says Mr. Mullan, I.C.S., "God knows, we have enough." But the last decade was healthy, and *kala-azar* is well under control. Voluntary limitation of births is practically unknown.

The population of the Assam valley was estimated at 800,000 in 1835; to-day it is about 5 millions. "*Si monumentum requiris*—If you seek for a monument to British administration," says Mr. Mullan, "read the history of Assam from 1800 to 1840, and then look about you."²⁹

OUTLET FOR SURPLUS POPULATION

Assam can receive more immigrants, but it has to be remembered that it is rapidly filling up. In the Goalpara district there is little room left for expansion; there was an enormous increase of settlers in the Kamrup district in 1921—31. In the Darrang district also the settlers are rapidly occupying any available waste land. The same seems to apply to Nowgong district, where the settlers have caused trouble by squatting in Government reserves, or forcibly occupying the land of local people.³⁰ While there is room for expansion in Assam, it is certainly not possible to dump the entire surplus agricultural population of India into Assam, or Assam and Burma.

The pressure on the soil is not so keenly felt in the Central Provinces as in some other parts of India. This Province receives immigrants (227,000 net in 1921—31). But so does Bengal (772,000 net in 1921—31). All that can be said is that general economic conditions do not drive the people from the province, except when crops fail.

External emigration affords little relief. The number of those who emigrated during the decade 1921—31 is estimated at about 1 million only.

²⁹ *Ibid.*, p. 31.

³⁰ *Census Report, India, 1931*, pp. 65-66.

AREA AND DISTRIBUTION

Destination of emigrants.	Persons.
Malaya	510,000
Ceylon	365,000
Fiji	15,000
Portuguese E. Africa	4,000
United Kingdom	4,000
Elsewhere	12,000

Emigration is controlled by the Emigration Act of 1922, under which the emigration of unskilled labour is prohibited except to such countries and under such conditions as may be specified by the Governor-General in Council. The effect of this Act has been to put a stop to the emigration of unskilled labour except to Malaya and Ceylon. The emigration of skilled labour is negligible. The total in 1921—30 was 130 (79 tailors, 29 theatrical artists, 18 bricklayers, 2 match-manufacturers, and 2 welders).

The Indian Agricultural Commission stated in 1928 that the annual amount of emigration to Ceylon and Malaya satisfied their economic demand and could not be adequately increased. Ceylon indeed is "slowly reaching the saturation point in absorbing Indian labour on the estates." The total number of Indians in Ceylon in 1931 was 778,000 persons, and in Malaya (British) 624,000.

Migration of labour between province and province is unrestricted by Government with the exception that certain provinces can regulate or prohibit the migration of labourers to the tea-gardens in Assam. The Agricultural Commission recommended the abolition of all restrictions on the movement of labour throughout India. The Commission found that migration within India was not taking place to the extent which might have been expected, in spite of the fact that pressure on the soil was "extreme" in North Bihar, in the deltaic areas of Bengal and Madras, and in certain parts of the United Provinces. The factors which limit the internal movement of labour are three: (a) attachment to land, however small be the holding of the cultivator, (b) indebtedness, which makes it difficult for the cultivator to leave the village permanently, and (c) "the important factor of ill-health."

Even if internal migration is not hindered in any way, it does not afford any solution of our problem. As for external emigration, as we have seen, it is of less consequence still.

A HOPELESS SITUATION

We are confronted with a hopeless situation. The problem of relieving the growing pressure on the soil is insoluble.

The maximum population which agricultural occupations can support in Europe is 250 per sq. mile. The number is higher in the United States of America, and the island of Porto Rico in the West Indies has an agricultural population of nearly 400 to the sq. mile. But the number supported by agriculture is much greater than 400 in many parts of India. Excepting Assam and the Central Provinces, there is no province in which the growth of numbers during the last decade has not placed a heavier strain on the land than it can bear under existing conditions.

Can the existing conditions of cultivation be changed?

Not under the existing economic system. India may utilise the results of biological progress to a certain extent. The cultivator may use better seed for sowing. But no revolutionary change in the methods of cultivation can be expected. India is a land of small peasants. But our methods of cultivation are extensive because the peasant does not possess the means of intensifying his cultivation. Under the existing system of land ownership India has no use for agricultural machinery. For motor tractors and combines one must have large farms, hundreds of acres in extent. Besides, there is a good deal of surplus labour in the villages at present. The use of labour-saving appliances in agriculture will create more surplus labour. ^{mechanisation} The modernisation of Indian agriculture is impossible unless it is preceded by a very great development of industries.

A growing population requires more food. But the problem of population in India is not a food problem. It would be dangerous to restrict the area under food grains, as our surplus of food has dwindled with the growth of numbers. But India can import food without difficulty. We may not be able to modernise our agri-

culture, but nothing prevents us from benefiting by agricultural progress in other countries. If the existing duty on wheat were removed the import of Australian wheat would increase.

The real problem is twofold: (1) limitation of births, and (2) finding non-agricultural occupations for the agricultural population.

Increase in education and culture would restrict births, but more than 90 per cent of the population are at present illiterate. The number of literates increased from 22·6 millions in 1921 to 28·1 millions in 1931 (aged 5 and over). The total number of persons of ages 5 and over in the whole of India in 1931 was 296·3 millions. The number of illiterates in 1931 was 268·2 millions. Assume now that the population ceases to increase, so that we have to educate just these 268 millions. At the present rate of progress (5·5 million of fresh literates in a decade), we should require about 49 decades, or 490 years to make 268 millions literate.

But what does literacy in the meaning of the Census imply? Does it mean real education and culture, such as might lead the people to restrict births? For that we may have to wait for a further 1000 years.

A change in the present religious outlook of the masses, which led them to attach more importance to happiness and well-being in this world than to life in the next, would most certainly modify their view of marriage and child-begetting. But what has the State done to bring about this highly desirable change in outlook? The State has assumed an attitude of neutrality in matters affecting religion. Indirectly the policy of the State (e.g., in regard to communal representation) encourages communalism and religious fanaticism. It may also be incidentally mentioned that communal representation acts as a spur to the growth of numbers.

We are doing nothing to lead the people away from religion, or to encourage them to appreciate "a materialistic standpoint."³¹

Dr. Hutton refers to the movement towards artificial birth control in India and says that it is "perhaps less hampered by

³¹ *Census Report, India, 1931*, p. 32.

misplaced prudery than in some countries which claim to be more civilized." But Neo-Malthusian Leagues in India have very limited utility. They would limit births among classes where limitation is not an urgent necessity. They leave the rural masses entirely unaffected. The difficulty in the case of the villagers is their religious outlook, even if we ignore the question of cost of the contraceptives.

It is obvious that there is little possibility of pressure on the soil being relieved by the voluntary limitation of births.

The question of subsidiary industries, or of rural reconstruction, is discussed in a separate chapter. The development of factory industries would solve the problem. And there is some evidence of a change in Government policy regarding manufacturing industries. But the industrial development of India is proceeding on wrong lines. We are concentrating on the production of consumable goods and have almost entirely neglected the manufacture of capital goods. It is a process of building from the top. It is as if in building a house one insisted on completing the top storey before laying down the foundations. The manufacture of machinery, modern means of communication and transportation by land, sea and air, and of essentially modern articles for which there is a growing demand in India, would create employment for millions of people, but political obstacles to industrial development on these lines are insuperable.

India needs a change of system which may alter the whole structure of her economy. Under the existing system, the proportion of the population dependent on Industry tends to decline with the progress of factory industries. The introduction of machinery causes unemployment in India and creates employment elsewhere.

TABLE I

POPULATION DISTRIBUTED BY PROVINCES, VARIATION PER CENT IN THE POPULATION AND MEAN DENSITY PER SQ. MILE

	Area in 100 sq. miles.	Population in millions.		Percentage of variation.		Mean density per sq. mile.		
		1931	1921	1921-31	1911-21	1931	1921	1911
India	1,809 ✓	353 ✓	319	+10.6 ✓	+1.2	195 ✓	176	174
Provinces	1,096	272	247	+10.0	+1.3	248	225	222
States & Agencies	712	81	72	+12.8	+1.0	114	101	100
<i>Major Provinces.</i>								
Assam	55.0	8.6	7.5	+15.6	+13.4	157	136	120
Bengal	77.5	50.1	46.7	+7.3	+2.7	646	602	587
Bihar & Orissa	83.0	37.7	34.0	+10.8	-1.4	454	409	415
<i>Bombay Presidency, including Aden C. P. & Berar</i>								
Madras	123.7	21.9	19.3	+13.3	-1.8	177	156	159
N.-W. F. P.	99.9	15.5	13.9	+11.5	-0.0	155	139	139
Punjab	142.3	46.7	42.3	+10.4	+2.2	328	297	291
U. P.	13.5	2.4	2.3	+7.7	+2.5	179	167	163
Burma	99.2	23.6	20.7	+14.0	+5.7	238	209	197
Larger States.	106.2	48.4	45.4	+6.7	-3.1	456	427	440
Baluchistan	233.5	14.7	13.2	+11.0	+9.1	63	57	53
Baroda	80.4	.4	.38	+6.9	-9.8	5	5	5
Gwalior	8.0	2.4	2.1	+14.9	+4.6	299	260	249
Hyderabad	26.4	3.5	3.2	+10.3	-1.3	134	121	123
Jammu & Kashmir	82.7	14.4	12.5	+15.8	-6.8	175	151	162
Mysore	84.5	3.6	3.3	+9.8	+5.1	43	39	37
Rajputana Agency	29.3	6.6	6.0	+9.7	+3.0	224	204	198
	129.1	11.2	9.8	+14.2	-6.5	87	76	82

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TABLE II

AREA, POPULATION AND DENSITY PER SQUARE KILOMETRE
IN CERTAIN COUNTRIES

		Area in 1000 sq. km.	Population in 1000	Density per sq. km.
Germany	..	469	64,776	138
Austria	..	84	6,733	80
Belgium	..	30	8,159	272
Bulgaria	..	103	6,067	59
Denmark	..	43	3,590	83
Spain	..	503	23,581	47
France	..	551	41,860	74
Greece	..	130	6,440	49
Hungary	..	93	8,781	94
Irish Free State	..	69	2,957	43
Italy ..	..	310	41,699	134
Norway	..	323	2,831	9
Netherlands	..	34	8,183	241
Poland	..	388	32,638	84
Portugal	..	90	6,360	71
Rumania	..	295	18,166	62
United Kingdom	..	244	46,340	190
Sweden	..	448	6,162	14
Switzerland ..	..	41	4,081	100
Czecho-Slovakia	..	140	14,823	106
U. S. S. R.	..	21,176	163,200	8
U. S. S. R. European Territory	..	5,999	128,800	22
Japan ..	..	382	65,500	171
Canada	..	9,557	10,460	1
U. S. A.	..	7,839	124,450	16
Egypt ..	..	1,000	14,992	15
Australia	..	7,704	6,526	0.9
India	4,675	352,838	75

(Source: *Statistical Year-Book of the League of Nations*, 1932-33).

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TABLE III

POPULATION SUPPORTED BY AGRICULTURE AND INDUSTRY

Country.	Date of Census	Agriculture, fishing, etc.	Industry.
Union of South Africa ..	1921	31'2	18'9
Egypt ..	.. 1917	69'2	8'4
Canada ..	.. 1921	35'0	26'9
U. S. A. ..	.. 1920	26'3	30'8
Germany ..	.. 1925	30'5	38'1
England & Wales (B) ..	1921	6'8	39'7
Belgium ..	.. 1920	19'1	39'9
Denmark ..	.. 1921	34'8	27'0
France ..	.. 1921	41'9	28'8
Italy ..	.. 1921	56'1	24'0
Norway ..	.. 1920	36'8	27'4
Netherlands ..	.. 1920	23'6	36'1
Poland ..	.. 1921	75'9	8'7
Portugal ..	.. 1911	57'5	21'5
Sweden ..	.. 1920	38'7	28'8
Switzerland ..	.. 1920	25'9	44'1
Australia ..	.. 1921	22'9	31'2
New Zealand ..	.. 1921	27'1	27'5

(Source: *International Statistical Year-Book*, 1927—League of Nations, pp. 44-45).

TABLE IV

FACTORIES SUBJECT TO THE INDIAN FACTORIES ACT

		No. of Factories.	Average No. of hands employed daily.
Madras ..	..	1,527	142,549
Bombay ..	..	1,550	370,704
Bengal ..	..	1,444	563,877
U. P. ..	..	376	92,161
Punjab ..	..	526	49,549
Burma ..	..	980	98,701
Bihar and Orissa	..	282	66,315
C. P. and Berar	..	695	68,856
Assam ..	..	620	45,820
N. W. F. P.	..	29	1,251
<hr/>			
Total, including smaller Provinces.	1930	8,148	1,528,302
	1921	3,965	1,266,395

(Stat. Abstract for British India, 1930-31).

CHAPTER II

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

“The actual increase since 1921,” writes the Census Commissioner for India 1931 (Dr. Hutton), “is 33,895,298, that is to say, 10·6 per cent on the population at the last census and 39 per cent on the population of India 50 years ago.”¹

The population of India increased from 318·9 millions in 1921 to 352·8 millions in 1931, or by 10·6 per cent. But the real increase of numbers between 1881 and 1931 was 33 per cent, not 39 per cent. The real increase was less than the nominal increase, found by comparing the recorded population in 1881 with that in 1931, on account of two factors: (a) the additions of area and population included at each census, and (b) the progressive increase in the accuracy of enumeration from census to census. The population recorded at each census in India is given below; the figures for England and Wales have been added for the sake of comparison:

TABLE I
RECORDED POPULATION IN MILLIONS

Year.		India.	England & Wales.
1872	..	206·2	22·7
1881	..	253·9	26·0
1891	..	287·3	29·0
1901	..	294·4	32·5
1911	..	315·2	36·1
1921	..	318·9	37·9
1931	..	352·8	39·9

According to the recorded figures the growth of numbers in India between 1881 and 1931 was about 99 millions, and the percentage of growth 39; the growth of numbers between 1872 and 1931 was about 147 millions and the percentage of growth 71!

But this is thoroughly absurd. We are concerned with the real, not nominal or apparent increase in numbers.

The following table shows the real increase of numbers since 1872:—

TABLE II
REAL INCREASE OF NUMBERS

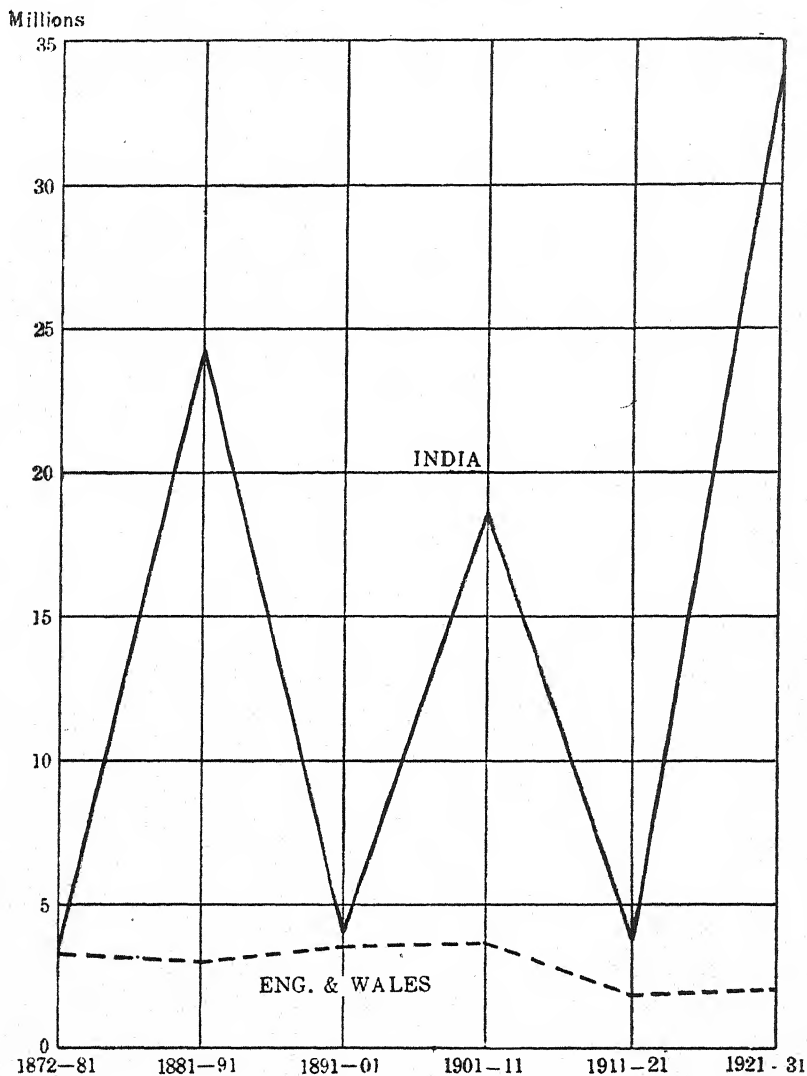
Period.	India. (Millions)	Increase per cent.	England & Wales. (Millions.)	Increase per cent.
1872—81	.. 3.0	1.1	3.3	10.1
1881—91	.. 24.3	9.1	3.0	11.5
1891—1900	.. 4.1	1.4	3.5	12.1
1901—11	.. 18.7	6.3	3.6	11.1
1911—21	.. 3.7	1.2	1.8	5.0
1921—31	.. 33.9	10.6	2.0	5.3
<hr/>				
Total 1872 to				
1931	.. 87.7	..	17.2	..

The population recorded at the census of 1881 exceeded the figure for 1872 by no less than 48 millions. But of this increase 33 millions was due to the inclusion of new areas, and 12 millions to improvement of method. Thus the real increase of numbers between 1872 and 1881 was only 3 millions. In the next decade the total increase was 33.5 millions, but the real increase was 24.3 millions. No allowance has to be made now for the inclusion of new areas or improvement of method, so that the whole of the recorded increase between 1921 and 1931 is real increase in numbers (33.9 millions).

IRREGULAR RATES OF INCREASE

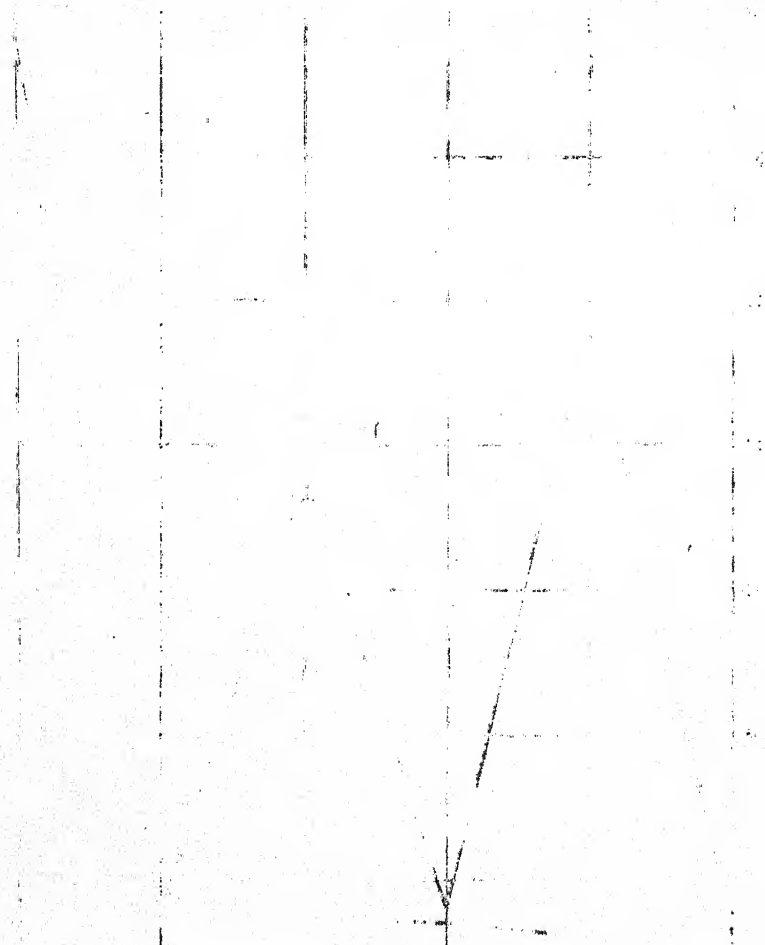
Table II shows that the rate of increase in the different periods in India was very unequal. The figures show a period of comparatively rapid increase following one of an almost stationary population. The movement of population in England and Wales is in striking contrast to that in India. The population was increasing steadily at a rate higher than that of India till 1911.

CHART No. 1 INCREASE IN POPULATION



THE JOURNAL OF THE

1914



W. W. W. W.

1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

Then came a fall in the rate of increase in 1911-21, principally due to the war. The factor which explains the slower rate of increase in England and Wales, and Western Europe at the present time is fall in the birth rate.

When figures of real increase of numbers in India and England and Wales are plotted on a chart, India's curve has the shape of a W; that of England and Wales is very nearly a straight line dipping towards the end.

What is the explanation of this peculiar movement of our population?

The growth of population in India is determined not merely by the relation between normal birth and death rates, but by abnormal causes which affect this relation, as famine and disease.

The famine of 1876-78 falls in the first period. This famine severely affected southern India, particularly the Madras Presidency, while its effect was felt generally throughout the country. The severity of the famine in Madras may be judged from the fact that in five districts of the province where famine was intense, the population in 1881, as compared with 1871, decreased 25·12 per cent; in two districts, where it was moderate, the decrease in population was 3·62 per cent, while in Shimoga district, where it was slight, the percentage increase was 0·15.

The effect of a famine in checking the growth of numbers is not confined to the famine zone. The resulting high prices and scarcity check rapid reproduction in districts which have not been affected by famine. "It may safely be accepted," wrote the Census Commissioner for 1881, "that when food is scarce there are fewer births"—this may be due to prudence, deliberate or instinctive, or physiological causes. "It remains stamped on the age tables" goes on the Census Commissioner, "that in 1876-78 very much fewer children were begotten throughout the [Madras] Presidency than in previous or subsequent years, and this is true of the so-called non-famine districts, although to an obviously slighter extent than of the famine districts."*

The period 1881-1891 was one of recovery. It is generally

* Census Report, 1881, p. 457.

seen that the birth rate rapidly increases after any period of exceptional mortality, due to war, diseases or famine. Famine mortality is high among the very old, the very young and those of a weak constitution. If then a period of famine is followed by a period of good crops, the population should increase rapidly as it contains an unusually high proportion of healthy persons at the reproductive ages. For example, the population of Madras and Mysore, both of which had suffered heavily in the famine of 1876-78, increased 15·7 and 18·1 per cent respectively in the decade 1881-1891, and after the famines of 1897 and 1900, the population of the Central Provinces and Berar increased 17·9 per cent in the decade 1901-11.

The real increase of population in the decade 1881-1891 was 9·1 per cent. This is the only decade between 1872 and 1921 which was free from any exceptional calamity.

Mr. Baines, the Census Commissioner for 1891, had prophesied that the rate of increase in the period 1881-91 was not likely to be maintained. After the good seasons of this decade he expected a check to the growth of population on account of famine. As it turned out, agricultural conditions in the decade 1891-1901 were adverse. There was scarcity over a considerable area in Madras and Bombay in 1891-92, and parts of Bihar were also affected. There were extensive crop failures in 1895 in the southern districts of the United Provinces, while in the following year famine conditions prevailed in the United Provinces, Central Provinces and Berar and parts of Madras, Bombay, Bengal, the Punjab, Rajputana, Central India and Hyderabad. The area affected was 300,000 sq. miles with a population of nearly 70 millions. At the heels of this famine there followed the famine of 1899-1900 which was even more disastrous. It is estimated that the total mortality due to these two famines was about 5 millions.

This period also saw the appearance of plague in Bombay in 1896. The epidemic rapidly spread in the Bombay Presidency and in some other parts of India, and by the date of the Census had caused a mortality of nearly a million.

Plague and famine checked the rate of growth of population. As the Census Commissioner for 1901 remarks: "In a period which

has witnessed two great famines of the century and the appearance of a new and deadly disease the wonder is not that the pace at which the population has grown is less than it was during the previous ten years, when the rate of progress was more rapid than usual, but that there should have been any increment at all.”*

The real increase of population in this period was 1·4 per cent.

Apart from famine, economic conditions of the decade were favourable to progress. The railway mileage open to traffic increased from 17,000 in 1890-91 to 25,000 in 1900-01; 43,000 miles of canals were in operation in 1901 as compared with only 9,000 ten years previously. There was also a steady development of various mining and manufacturing industries in the decade. The Census Commissioner regarded the outlook for the future as hopeful, unless famine again supervened. He did not think that India had already more inhabitants than it could support. There was considerable room for expansion. While in particular parts of the country (parts of Bihar and in the east of the United Provinces) the pressure on the soil was beginning to be felt, this was not true of the country as a whole. About two-thirds of the population of India occupied only a quarter of the whole area, and the remaining one-third of the population was scattered over three-quarters of the area which nowhere contained as many as 200 persons to the square mile. It was also seen that the greatest increase of population had occurred in districts which in 1891 had already a density of from 500 to 600 persons per square mile, and the smallest increase in districts which had a population of 100 to 200.

The next decade, 1901—11, was free from any serious widespread famine, though crop failures occurred over a wide area in 1907, extending from Bihar to the Punjab and Bombay, and famine conditions prevailed in the United Provinces and in a few districts elsewhere. This period has been characterised as one of “moderate agricultural prosperity” for the country as a whole.

The real increase of population in this decade was 6·3 per cent. It would have been greater but for disease. Malarial fever took a heavy toll of mortality in the irrigated tracts of Eastern and

* Census Report, 1901, p. 84.

Central Punjab and the Ganges-Jamuna Doab in the United Provinces, where in 1908 alone the reported mortality from "fevers" was nearly two millions. The Punjab, the United Provinces and Bombay suffered severely from plague; the total plague mortality was estimated to be 6.5 millions, of which over one-third occurred in the Punjab.

The outstanding feature of the decade 1911—1921 was the influenza epidemic. The war falls in this period, but its effect on the growth of numbers was negligible. The actual number of death casualties among the officers and ranks of Indian army units and labour corps was 58,238. The maximum number serving out of India in combatant and labour units at any one time between 1914 and 1919 was approximately Indian troops 250,000, labour corps 230,000, total 480,000; the number about the time of the census was troops 105,000, labour corps 20,800, total 125,800.

Economic conditions were favourable till 1917. The monsoon of 1918 was feeble, and that of 1919 was not much better. The outturn of the chief food crops declined heavily and prices rose. Influenza came at a time of widespread crop failures. It affected every part of India and "wiped out in a few months practically the whole natural increase in the population for the previous seven years."

The number of deaths due to influenza in the area under registration was about 7,100,000 in 1918 and 1-1/3 millions in 1919, giving a total recorded mortality of 8-1/2 millions. But the total influenza mortality was much greater than this, for on account of the complete breakdown of the reporting staff the registration of vital statistics was suspended in 1918, and when later the figures were reconstructed, there were many omissions, particularly as regards women. The figure given above also does not take account of the mortality in areas where there was no registration, and thus neglects one-fourth of the total population. On the whole it was estimated by the census authorities that the total mortality from influenza was between 12 and 13 millions for India. The Actuarial Report on the Census of 1921 put influenza

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

mortality at 22 millions or 7 per cent of the population. The following figures, though imperfect and incomplete, enable us to realise the severe effect of the epidemic on the growth of numbers:

Province:	Average yearly excess of births over deaths per mille, 1911—1917	Average yearly excess of deaths over births per mille, 1918—1920.
Assam	5·4	— 9·4
Bengal	4·8	— 5·5
Bihar & Orissa	9·1	— 9·1
Bombay	4·7	— 19·8
Burma	8·5	— 0·1
C. P. & Berar	11·8	— 23·1
Madras	8·5	— 3·1
N. W. F. Province	8·3	— 11·1
Punjab	12·5	— 5·0
United Provinces	10·6	— 17·8

The epidemic affected rural districts more severely than urban districts. In the Punjab the mortality in urban areas was 36 per mille as against 51 per mille in rural areas. Mortality was under 5 per cent among Europeans, about 6 per cent among Indians of the higher classes who were able to obtain medical attendance, and over 50 per cent among the people in rural districts. The heavy mortality in rural areas was due to the lack of medical assistance and improper and inadequate provision of diet, clothing, etc., in illness.*

The Punjab suffered severely from influenza but it still suffered less than the United Provinces and the Central Provinces. At the end of the decade, the population of the United Provinces was found to have decreased 3·1 per cent and of the Central Provinces

* "From the middle of October to the November," says the Census Commissioner for the Punjab, "the state of the Province beggars description. Hospitals were choked, dead and dying lay by the sides of the roads, burial grounds and the burning ghats were strained beyond their capacity and corpses lay awaiting burial and cremation. Terror and confusion reigned supreme, the postal and telegraph services were disorganised, and a harassed and depleted medical service struggled valiantly, but ineffectually to cope with the disease. During this period large numbers of the educated classes earned the gratitude of the sufferers by devoted self-sacrifice and social service, while medical students throughout the province rendered every assistance within their power." Punjab Census Report, 1921, p. 60.

0·3 per cent as compared with 1911. On the whole the population of India increased by 1·2 per cent.

The last decade, 1921—31, was free from famine and epidemics and the increase of numbers in this decade constitutes a record (33·9 millions).

It is wrong to attribute this heavy increase to the beneficent activities of the Public Health Department. The utility of this Department is undisputed. But the effect of its activities on the movement of our population is so slight as to be negligible.

As we have seen, between 1872 and 1931 there are two decades of rapid growth, 1881—91 and 1921—31; each followed a period in which the population was practically stationary (increase 1·1 per cent in 1872—81 and 1·2 per cent in 1911—21). The explanation of the considerable growth of numbers in 1921—31 is the same as that for 1881—91; on account of the elimination of the weak and the unfit by disease (1911—21) or famine (1872—81), the population contained an unusually high proportion of vigorous persons at reproductive ages.

RATE OF INCREASE AS COMPARED WITH EUROPE

Writing on our population problem Dr. Hutton says:

“Attention has already been drawn to the grave increase in the population of this country. The actual figure of the increase alone is little under 34 millions, a figure approaching equality with that of the total population of France or Italy, and appreciably greater than that of such important European powers as Poland and Spain. The population now even exceeds the latest estimate of the population of China, so that India now heads that list of all the countries in the world in the number of her inhabitants. This increase, however, is from most points of view a cause for alarm rather than for satisfaction.”²

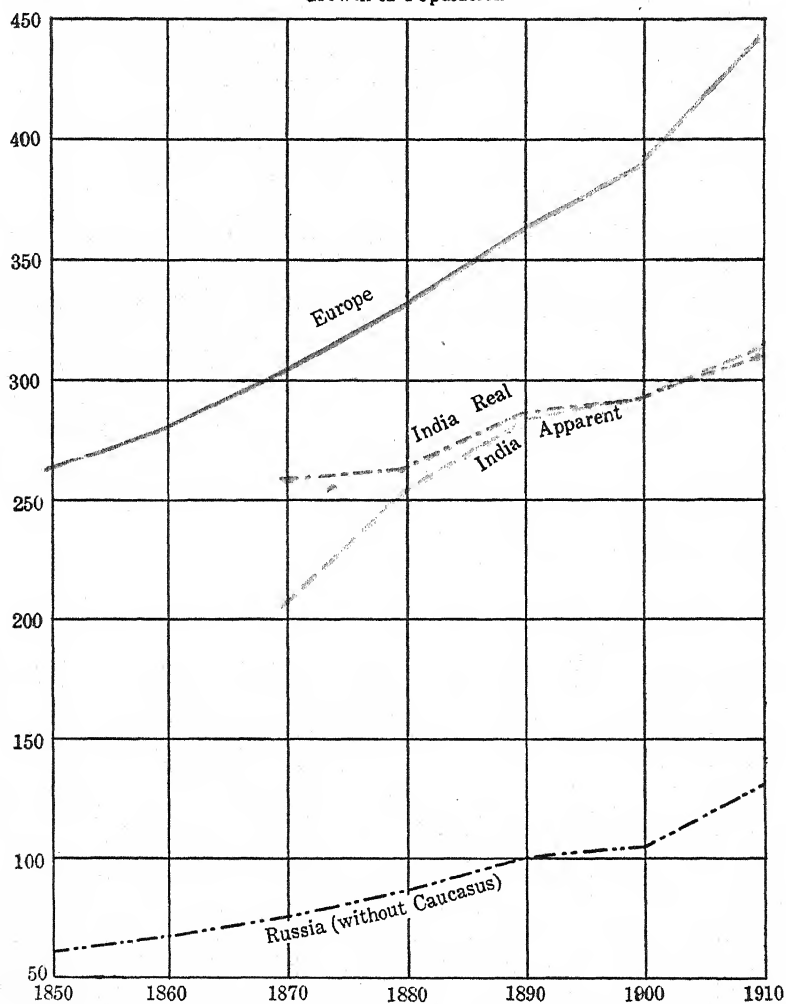
Everyone must agree with Dr. Hutton that the rapid increase of numbers in 1921—31 is a cause for alarm rather than satisfact-

² P. 29.

CHART No. 2

Millions

Growth of Population





ion. As we have seen, the pressure on the soil has increased in almost all provinces, and there are no means of relieving it, except death. One is led to expect from the peculiar movement of our population in the past that epidemics will carry off millions of our people, enfeebled by want, in the coming years. This cannot be a cause for satisfaction to anyone.

But, considering the rate of increase since 1872, the population of India is not increasing rapidly. As compared with the leading European countries (France alone excepted), the rate of increase is slower in India.

How does the rate of growth of the population of India compare with that of other countries?

For European countries reliable statistics of population are available since 1800. It is well known that the population of Europe was increasing very slowly before the 19th century. The growth of the population was checked by epidemics and war. With the beginning of the 19th century the conditions completely changed and the population began to increase rapidly. It is estimated that the population of Europe grew from 187 millions in 1800 to 447 millions in 1910, an increase of 260 millions in 110 years, the rate of growth being 7·9 per cent per annum.

The rate of growth became particularly rapid about the middle of the 19th century. For example, the population of England and Wales increased from 9·2 millions at the beginning of the 19th century to 18 millions in 1850, 32·5 millions in 1900 and 36 millions in 1911. Ireland shows a decrease, but this is due to special causes. But even the Irish population increased from 5·5 millions in 1800 to 8,295,000 in 1845, after which a steady decrease in numbers began, so that the population was reduced to 4,390,000 in 1911. Emigration wholly accounts for this decrease. The population of Germany increased from 24·5 millions in 1800 to 35 millions in 1850 and about 65 millions in 1910. The increase in Russia was still more remarkable—from about 38 millions in 1800 to 61 millions in 1850 and 131 millions in 1910. The figures for Russia are not absolutely reliable, but

there is no doubt that the population of Russia has increased very rapidly since 1800.

It is interesting to note that at the beginning of the 19th century the population of France exceeded that of any European country with the exception of Russia. Even in 1846 France had a population of 34,546,975, as compared with Germany's 34,396,055. But four years later (in 1850) the German population exceeded the French slightly, and since then the difference has steadily increased. In 1910 Germany had a population of about 65 millions as compared with France's 39,192,000.

The growth of the population in belligerent countries was suddenly checked by the war (1914—18). The war also affected the growth of numbers in neutral countries.

The war affected the growth of population both directly and indirectly. Indirectly it caused a fall in the birth rate and in the number of marriages, and an increase in the death rate, apart from the direct losses due to war casualties.

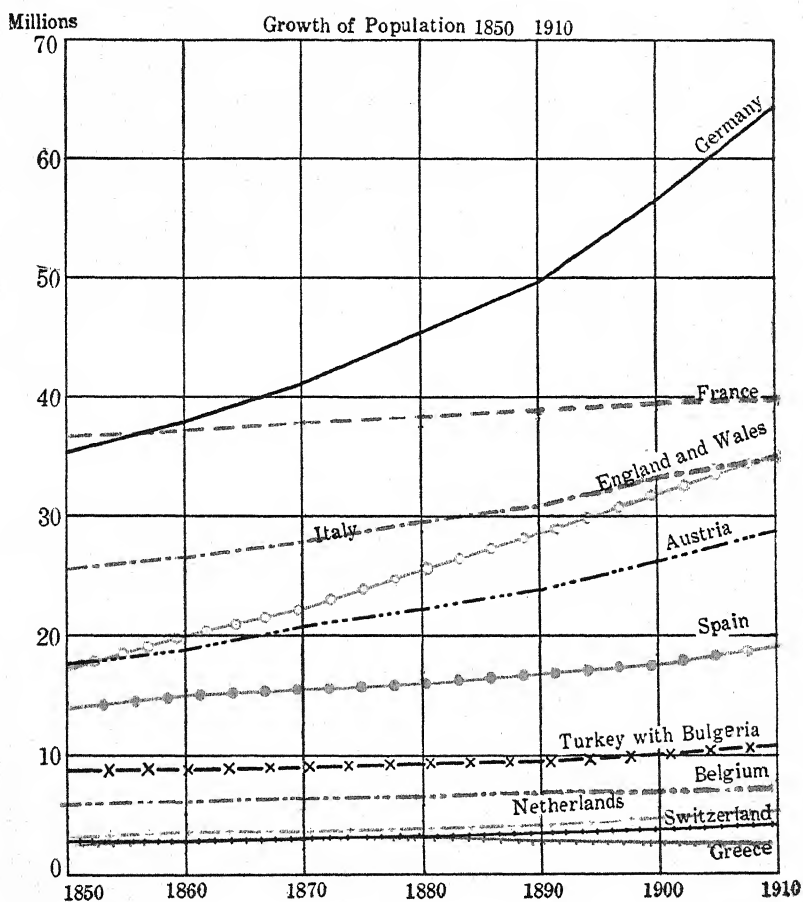
The total decrease in numbers due to the decrease in births and increase in deaths among the civil and military population in the case of four leading belligerents is shown below³:—

	Decrease in births from May 1915 to July 1919.	Increase in deaths. 1914-18.	Total decrease.	Per 100 of the popula- tion of 1914.
Germany ..	3,590,000	2,160,000	5,750,000	8·5
France ..	1,390,000	1,540,000	2,930,000	7·4
Italy ..	1,300,000	1,240,000	2,540,000	7·0
Great Britain & Ireland	840,000	925,000	1,765,000	3·8
TOTAL ..	7,120,000	5,865,000	12,985,000	6·9

The total loss amounted to about 13 millions, or about 7 per cent of the total population of these four countries. Germany suffered most (8·5 per cent) and Great Britain and Ireland least (3·8 per cent).

³ *Handwoererbuch der Staatswissenschaften*, Vol. II.

CHART No. 3





MOVEMENT OF THE POPULATION AND CIVIL CONDITION

In spite of the direct and indirect effects of the war in reducing numbers, the population of Germany (without including territory which Germany lost according to the terms of Peace) increased 3·5 per cent between 1910 and 1919, of Italy, between 1911 and 1921, by 7·5 per cent, and of Great Britain (without Ireland) by 4·7 per cent in the same period. In each of these cases the rate of growth was more rapid than that of the Indian population (1·2 per cent). The population of Belgium increased by 0·5 per cent, and of France decreased by 4·8 per cent between 1911—21.

The following table shows the growth of numbers in India and other countries between 1870 and 1930:—

TABLE

	(a). 1870. Millions.	(b). 31-12-1930. Millions.	Increase per cent.
India	265·1	352·8	33·0
Germany	40·9	64·5	57·7
Italy	26·7	41·0	53·5
Spain	16·3	23·6	44·7
France	36·8	40·0 (c)	8·7✓
Belgium	5·0	8·1	61·2
Netherlands	3·6	7·9	108·3
Denmark	1·8	3·6	100·0
England & Wales	22·7	39·9	75·7
Russia	106·4 (d)	161·0	51·3
Europe	307·7	505·7	64·3

Sources:—

(a) *Handwoererbuch der Staatswissenschaften*, Vol. II.

(b) *Statistical Year-Book of the League of Nations* for 1931-32.

(c) The population of France in March 1931 was 41,134,923.

Add to this the number of military and naval forces and crews of the commercial navy abroad—93,928, and deduct from the total 1,898,376, which is the population of the territory acquired by France according to the Treaty of Versailles.

(d) For Russia the earlier figure, that for the year 1897, is given in the *Statesman's Year-Book*, 1933.

It is seen that of all countries mentioned in the table the rate of growth was slowest in India, with the sole exception of France.

As compared with our 33 per cent increase, the population of England and Wales increased by about 76 per cent. Between 1897 and 1931, *i.e.*, in a period of 34 years, the population of Russia increased a little more than 51 per cent.

India may well be compared with Europe, for in many respects India is more like a continent than a country.

In 1931 Europe, including European Russia, had a population of about 506 millions, or 64·3 per cent greater than its population in 1870. In these 60 years the population of Europe increased at a rate about double that of India.

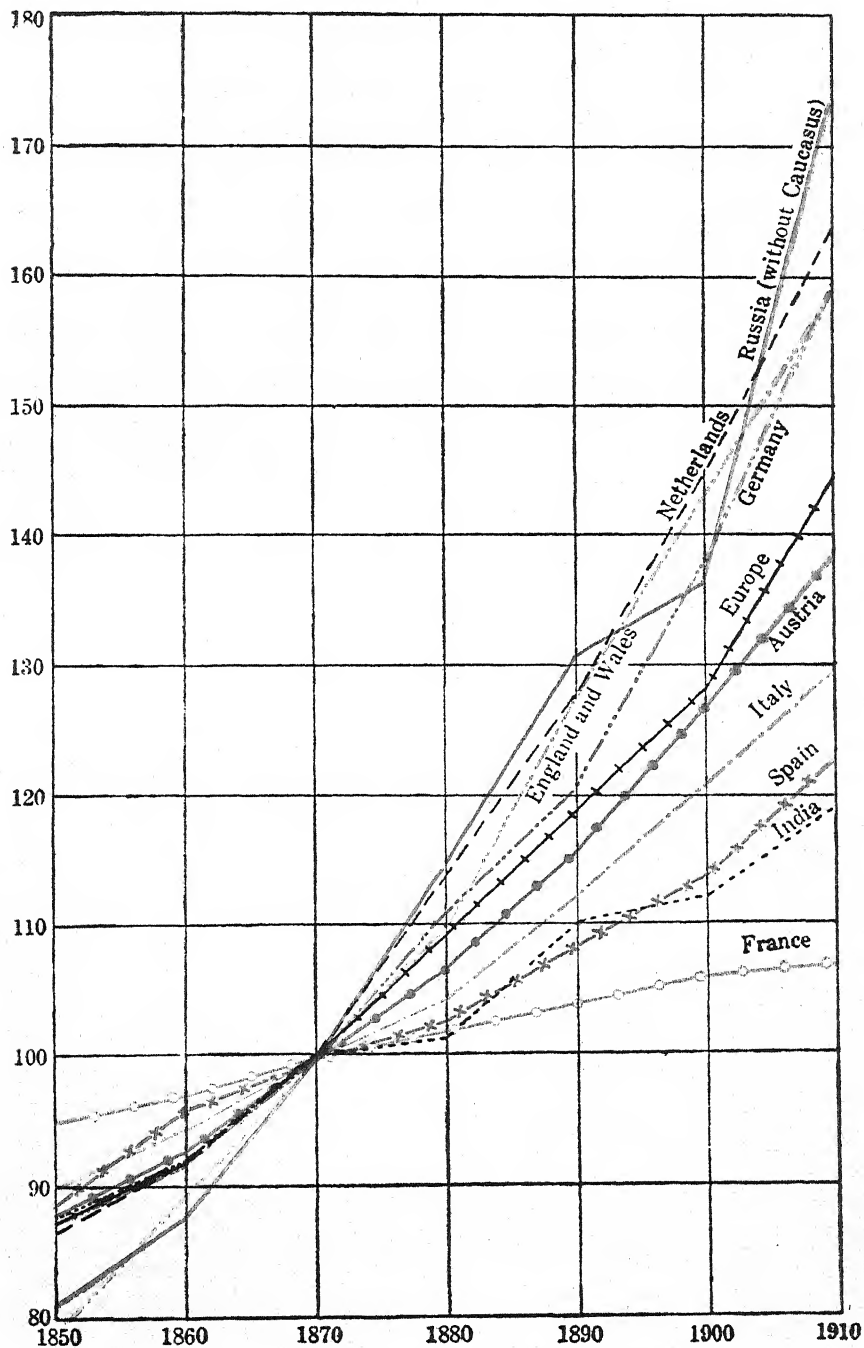
BIRTH AND DEATH RATES

When we compare birth and death rates in India with those in other countries it is found (1) that both are higher than in other countries, and (2) that while in other countries both birth and death rates show a tendency to fall, in India they show no such distinct tendency.

It has been often pointed out that the reported birth and death rates in India are not accurate. The difference between birth and death rates estimated by the actuary (Mr. Acland) at the census of 1911 and the reported rates amounted to 7 or 8 omissions per mille for births, and slightly less for deaths. In using the reported birth and death rates we have, therefore, to bear in mind that the actual birth and death rates are higher than the reported rates. The records of births and deaths, however, though incomplete, are not useless. As was pointed out by the Census Commissioner for 1921, "Except for progressive improvement in urban areas and occasional breakdowns during epidemics, the errors are more or less constant from year to year,"* and while not placing absolute reliance on the figures, we may use them for purposes of comparison.

In the decade 1921—30 the highest birth rate per 1,000 of the population in India was 36·9 (1928) and the lowest 31·85 (1922). Between 1885 and 1900 the highest and lowest birth rates were 42·16 (1899) and 31·54 (1892). The year 1899

* Census of India, Vol. 1, Report, p. 15.

$$1870 \div 100$$


[illegible]

shows an exceptionally high birth rate—a record for India. Ignoring this year the highest birth rate was 36·58 in 1900. The average birth rate in 1921—30 (34·35) was lower than the average for 1885—90 (35·83), and that for 1891—1900 (35·43). But it is difficult to speak of any tendency towards a lower birth rate in India such as the countries of Western Europe show.

The birth rate in Germany, France and the United Kingdom at the present time is below 20 per 1,000 of the population. In 1881—90 the birth rate in Germany was as high as 36·8, in France 23·9 and in England and Wales 32·5. In Europe the highest birth rate in 1930 was that of Rumania (35·0). The birth rate in Italy and Holland is higher than in Germany, France or the United Kingdom, but it used to be much higher fifty years ago (Italy 37·7 and Netherland 34·2 in 1881—90).

The fall in the birth rate in Western Europe is regarded with alarm, and, for military reasons, serious efforts are being made to encourage the growth of numbers. An interesting example of the methods employed to stimulate the declining birth rate is furnished by the following item of news which appeared in the *People* of February 12, 1935.

“Just before Christmas, Signor Mussolini presented 4,000 lire (about Rs. 1,000) to each of 94 mothers who since November 4, 1918, had given birth in all to 910 children still alive. The 94 mothers came respectively from the 94 provinces of Italy, and Signor Mussolini extolled them ‘as an example to all the mothers of Italy.’ In Rome the six most prolific mothers were each presented with a four-roomed flat.”

It would seem that the problem of the birth rate in India and Western Europe is very different. Here every one would welcome a check to “the devastating torrent of babies.” In Western Europe, where the torrent has become a ‘trickle,’ desperate but, on the whole, unsuccessful attempts are being made to restore the torrent again. It will not be uninteresting for us in India, where births are absolutely uncontrolled (except by Nature), to study the causes of the decline in the birth rate in Western Europe.

Various theories have been put forward to account for this phenomenon. They have been carefully analysed in a recent German publication.⁴

1. Relations between the sexes have altered, and the common view of sexual morality has changed. Sexual gratification outside the bonds of marriage is not only regarded as moral but a bodily need. The prevention of pregnancy is no longer looked upon with disfavour; what is condemned is the bringing of children into the world whose chances of success and happiness in life are small. Woman decides how many children she will bear, and it is considered wrong to destroy her beauty and health through frequent child-births.⁵

2. The well-known German economist Brentano has sought the aid of Gossen's law of diminishing utility and substitution to explain the phenomenon. To people in a low stage of culture sexual pleasure is the only or the most important form of pleasure. Men and women who enjoy a high degree of prosperity and culture care also for other pleasures. "Man," says Brentano, "ceases to produce children when the increase in their number procures less satisfaction than other pleasures of life, which he would have to do without otherwise."⁶

3. The decline in the death rate increases the proportion of men of higher ages in the total population, which must tend to restrict the chances of promotion of younger men. The decline in the death rate thus indirectly prevents the number of marriages and the size of the family from increasing too rapidly.

4. The rate of infant mortality has gone down considerably in the progressive countries of Europe. Parents wanting two or three children do not bring more into the world, knowing that the children born will live.

5. Women claim equality with men in Europe, and their emancipation, to which the Great War gave an impetus, is an important cause of the decline in the birth rate. It is estimated

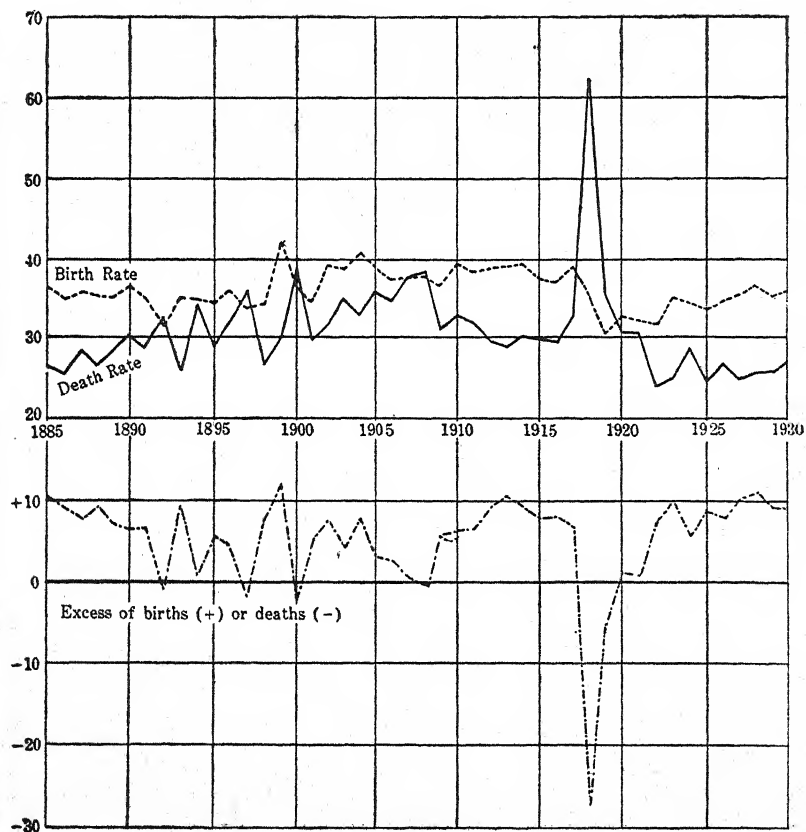
⁴ *Die Ursachen des Geburtenrueckganges im europaischen Kulturkreis* by Dr. Roderich V. Ungern-Sternberg (Berlin, 1932).

⁵ *Dr. Ungern-Sternberg, loc. cit., p. 43.*

⁶ *Ibid., p. 51.*

CHART No. 5

INDIA.



Be fruitful and multiply



that of the total number of females in Europe about 30 per cent earn their own living; this proportion is 65·70 per cent in the case of men.

The total number of females in India is 171 millions, of which 27·9 millions are shown in the Occupation tables under "Total earners' principal occupation"; thus 10·6 per cent of the females in India (ignoring working dependents) are earners. But it is difficult to say whether our figures are comparable with those for Europe. The proportion of independent women who earn their own living is probably less than 10·6 per cent of the total number of females. The principal occupation of women, as that of men, in India is agriculture.

Emancipation of women, both in the cultural and material sense, reduces the birth rate. A working woman of the proletariat has fewer children because she remembers her own sufferings as a member of a numerous family.

6. The Church condemns the voluntary limitation of births, but the influence of the Church is declining. The rising tide of materialism and atheism may not be a direct cause of the declining birth rate, but it does indicate, as Dr. Roderick V. Ungern-Sternberg contends, a change of mentality. Generally in Europe clergymen have the largest families.

Among religious people, whether Hindu, Sikh, Muslim or Christian, the idea persists that life is from God, for which reason birth-control is sinful. The average Indian shares the conviction expressed by the poet in the following verses:

*Jis ne yeh munh diya hai k̄hane k̄o
Dant jis ne diye chahane k̄o
Jis ne bak̄sha nigalne k̄o/hai gala
Hazm k̄arne k̄o hai diya ma' da
Kya woh k̄hane k̄o k̄uchh nalin dega?
Kyon nahin dega bilyakhin dega.*

The average Indian has never heard of the theory which explains the evolution of man (including his mouth, teeth and the digestive apparatus) without reference to a deliberate act of the Creator. In the same sense Maulana Rum has written:

Ai ze gham mürdah ki wast az nan tihist

Chun khafoor ast o rahim in tars chist

7. Use of contraceptives. This is known to all classes in Europe.⁷ The popularisation and cheapening of contraceptives, which do not injure health nor affect sexual enjoyment, has furnished the means of universalising the voluntary limitation of births.

8. It is well-known that the frequency of births decreases with prosperity. The ratio of children born in the poorest to those in the richest families is 3:1. The effect may be direct or physiological, or indirect: with the growth of culture and refinement, which prosperity brings, there is a growing desire to maintain a high standard of living.

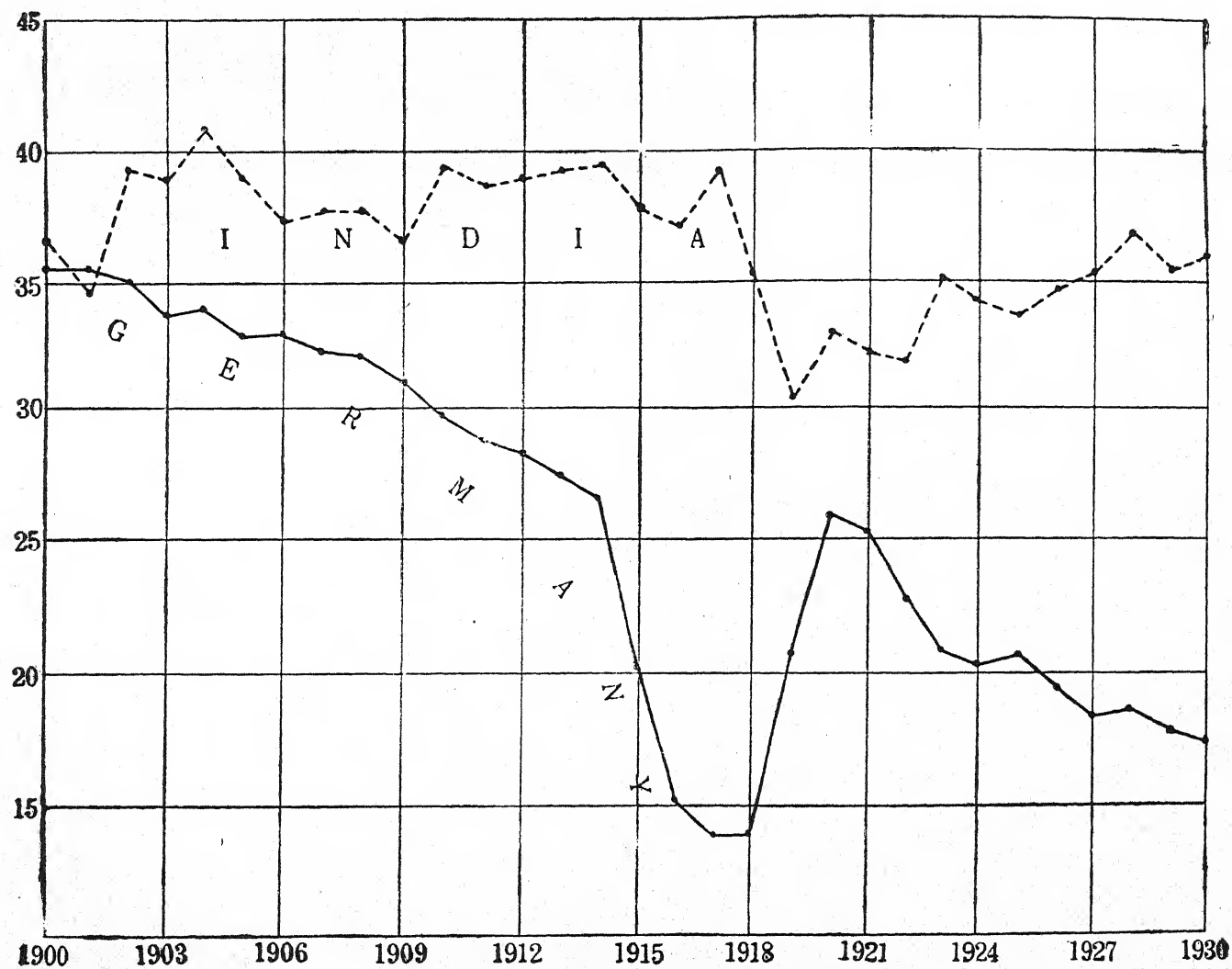
9. Urbanisation in most cases is found to lower the birth rate, and this is one of the reasons why Signor Mussolini is an enemy of urbanisation. In 1929 the birth rate for the whole of Germany was 17·9 per thousand, and for Berlin only 10·0 per 1,000. Dr. Ungern-Sternberg has very good reasons to complain of the *Gebaerleistung* of Berlin, or the achievements of Berlin in the matter of child-production. In the year 1926 Berlin's net achievement in this direction was *minus* 1·0 per thousand inhabitants (birth rate 10·0 and death rate 11·0 per 1000). Berlin stands lowest among the cities of the world, and Moscow leads with a birth rate of 29·8 per 1000 which exceeds the death rate (13·2) by 16·6 per 1000.

There is no appreciable difference between London's birth rate and the average birth rate for the whole of England and Wales. This is because the whole of the country is industrialised, and Neo-Malthusian habits and practices are widely spread among all classes.

Indian statistics are difficult to interpret. Among the provinces Delhi has the largest ratio of urban to rural population (5:3), but in defiance of the law which operates in Europe, Delhi has the highest birth rate. In 1930 the ratio of births per 1000 of the population was for Delhi 49·25, Assam 31·35, C. P. and

⁷ Excepting those who object to birth control for particular reasons, uncontrolled births take place in Europe only in the case of idiots and drunkards. See *Aufgaben der Bevölkerungspolitik* by Dr. Med. E. H. Stoll (Jena, 1927), p. 5.

CHART No. 6 BIRTH RATE IN INDIA AND GERMANY, 1900—1930.





MOVEMENT OF THE POPULATION AND CIVIL CONDITION

Berar 47·74, Bihar and Orissa 36·2, Burma 28·87, Punjab 43·3, U. P. 37·31, Bengal 26·6, Bombay 37·41 and Madras 39·8.

The high birth rate for Delhi is irreconcilable with the census figure (based on the examination of 2,246 slips) of the average number of children born per family in this province—3·5. This average is highest for Travancore State, 6·5. Gwalior follows with 6·2, and next to Gwalior is Bengal with an average of 6·0 children. Bombay and Punjab are about equal with 4·0 and 3·9 children respectively.

Considered by religion or community, Christians and Primitive tribes ('Tribal'), lead with an average of 5·0 children born per family. Parsis come next with 4·6 children; Hindus have 4·3, and Muslims and Sikhs 4·1 each.

Considered by occupation those following the professions of law, medicine and instruction have the smallest number of children, 3·7 per family, while priests ('religion') have the largest, 5·2. But cultivating owners have more children (4·4) than agricultural labourers (4·3). In the matter of education, culture and refinement, however, there is little to choose between cultivating owners and agricultural labourers in India.

It may be doubted whether artificial checks operate to limit the size of the family to any very large extent even in the case of those who follow the professions of law, medicine and instruction. In the case of all classes the size of the family in India is determined chiefly, and in that of rural population solely, by natural causes. Education is Westernising men, but there is no Westernising of women as yet. The birth rate is uncontrolled in the towns in the same sense in which it is uncontrolled in the villages.

DEATH RATE

A high birth rate necessarily means a high death rate. We have seen that it is not possible to speak of any tendency towards a decline in our birth rate. No such tendency is exhibited by death rates either. But death rates in a decade depend upon the conditions of health. The death rates were lower in 1921-30 than in the preceding decade; but they will probably be higher in the decade

INDIA BEFORE AND SINCE THE CRISIS

1931-40. In a country where the growth of numbers is controlled by disease it is impossible to speak of any definite trend in death rates.

A few examples of the fall in death rates in other countries are given below:—

		1881—90	1930
Germany	.. ..	25·1	11·1
France	.. ..	22·1	15·6
Italy	.. ..	27·3	14·1
Holland	.. ..	21·0	9·1

In India the death rate in towns is always higher than in rural districts, the difference amounting to 4·5 per 1000. But in the influenza epidemic of 1918 the death rate in rural districts exceeded that in towns: 62·98 per 1000 in rural districts and 56·76 per 1000 in towns.

According to class, Hindus and Muslims show the same death rates, but those for Christians are distinctly lower. 'Fevers' claim the largest number of deaths, but the term is vague and covers all kinds of diseases.

Towns in the United Provinces have generally the highest death rates. Between 1921-30 the death rate in Benares ranged between 46·10 and 66·81 per 1000.

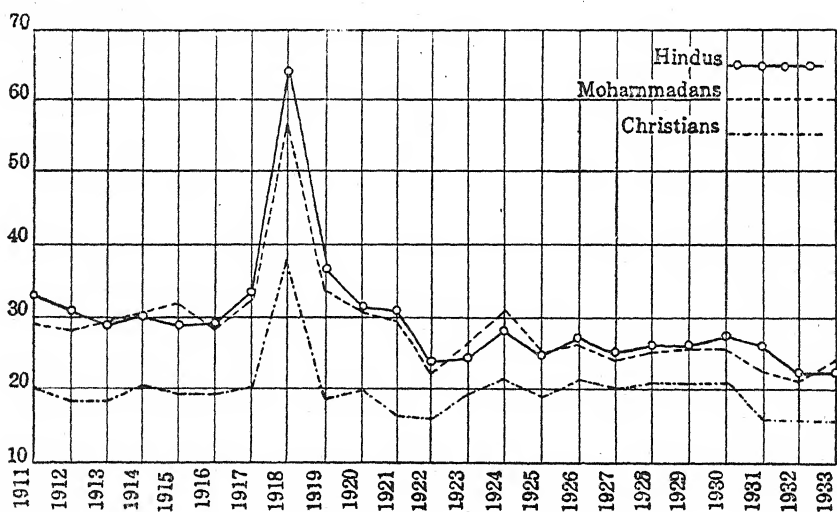
There is a striking contrast in death rates in cities and cantonments:—

Deaths per 1,000. 1930.		City.	Cantonment.
Hyderabad	.. ..	30·52	6·65
Lucknow	.. ..	47·11	18·33
Benares	.. ..	55·74	12·04
Fyzabad	.. ..	28·03	7·20

5. INFANT MORTALITY.

Along with the general death rate, the rate of infant mortality has heavily fallen in most European countries during the past 50 years or more. The fall between 1871-75 and 1908 amounted to 21·5 per cent for France, over 34 per cent for Sweden, Denmark,

CHART NO. 7 RATIO OF DEATHS PER 1000, 1911-1933.



MOVEMENT OF THE POPULATION AND CIVIL CONDITION

and Netherlands, and 44 per cent for Switzerland. In 1871-75 infant mortality in Germany per 1000 children born living was 244—a little higher than our own average rate at the present time. The rate fell to 151 in 1913, 133 in 1921 and 85 in 1930. In 1930, among European countries, Switzerland and Holland had the lowest rate of infant mortality—51 per 1000. But Australia and New Zealand show still lower rates (41 and 31 respectively in 1931).

These rates are so low as to be almost incredible. The average for India is about one-fifth or 20 per cent, which sometimes rises to over 55 per cent in cities like Bombay.

No marked fall in the infant mortality rate occurred in the decade 1921-30.

AGE-DISTRIBUTION

TABLE I
AGE-GROUPS. (MALES)^a

Ages.	Germany (1925)		France (1926)		India (1931)	
	No. (1000)	Per 1000 males.	No. (1000)	Per 1000 males.	No. (1000)	Per 1000 males.
0-10	6,007	192	2,996	155	50,231	278
10-19	6,420	213	3,281	170	37,613	209
20-29	5,533	183	3,282	170	31,781	176
30-39	3,992	132	2,540	132	25,765	143
40-49	3,713	123	2,507	129	15,149	84
50-59	2,915	96	2,205	114	9,284	52
60+	2,617	87	2,460	127	8,106	45
Total	30,197	..	19,309	..	177,929	..

Age-distribution in India is also in striking contrast to age-distribution in European countries.

Our age-pyramid has the broadest base, and the narrowest top. The broad base is due to the large proportion of children

^a For Germany and France, see *Stat. Year-book of the League of Nations*, 1932-33.

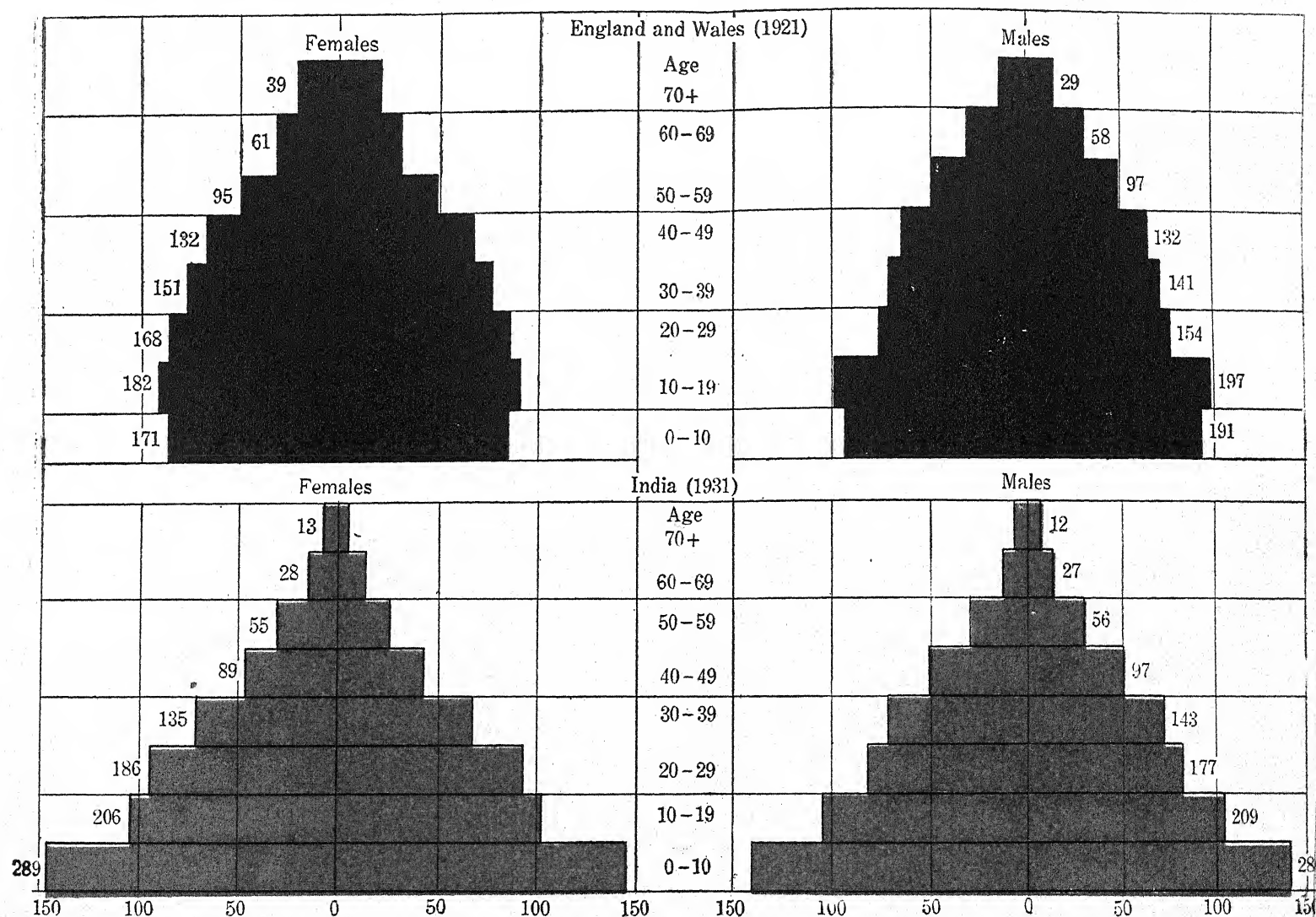
(0—5) in our proportion—147 males per 1000 males, as compared with 95 in France and 91 in Germany. In the highest age-group (60 +) we have 45 per 1000, as compared with Germany's 87 and France's 127.

Our age-pyramid is the most regular. In the case of France and Germany the numbers in the age-group 10—19 are greater than in the preceding group. The heavy drop in the second age-group in our case is due to the high rate of infant mortality.

Germany had 234 in the first age-group in 1910, as compared with 192 in 1925; and France 171 in 1911 as compared with 155 in 1926. The fall in each case is due to decline in the birth rate—fewer children are born and therefore the proportion of children to the total population has fallen.

Age-distribution of the population fluctuates from decade to decade. If both the birth rate and the death rate are declining, the proportion of the population in the first age-group will decline, and that in the higher, particularly the last age-group rise. In Europe these changes are due to the deliberate action of man: voluntary limitation of births, improvement in conditions of public health and success in fighting disease which have increased the average duration of life. In India natural causes, or famines and epidemics, determine the changes in the age-distribution of the population. For example, per 10,000 of the population there were in 1881, 1318 children (ages 0—5), 3010 adults (25—45), and 475 old men (60 and over). The proportion of children was below and of adults above the normal on account of the famine of 1876-78. In 1891 the proportion of children rose to 1409 and that of adults fell to 2969. The influenza epidemic of 1918-19 claimed a higher proportion of victims from the ranks of children and adults than old men, with the result that in 1921 there were per 10,000 of the population 1202 children, 2947 adults and 507 old men. In 1931 the proportion of children increased to 1478 and that of adults and old men fell. The fall in the proportion of old men from 507 to 384 does not signify that somehow conditions of life have suddenly become adverse to them. It is largely due to the heavy increase in the proportion of children.

CHART No. 8 AGE PYRAMIDS FOR INDIA (1931) AND ENGLAND AND WALES (1921).



MOVEMENT OF THE POPULATION AND CIVIL CONDITION

TABLE II

AGE-DISTRIBUTION OF 10,000 OF EACH SEX IN INDIA

MALES

		1881	1891	1901	1911	1921	1931
0—5	..	1,318	1,409	1,254	1,327	1,202	1,478
25—45	..	3,010	2,969	2,985	2,981	2,947	3,835
60 and over	..	475	462	466	485	507	384

FEMALES

		1,419	1,527	1,339	1,433	1,316	1,605
0—5	..	1,419	1,527	1,339	1,433	1,316	1,605
25—45	..	2,978	2,931	2,955	2,931	2,904	2,724
60 and over	..	591	573	555	555	557	406

If we have a high proportion of children (0—5) at this time, then 10 years later there would be a higher proportion of boys of 10—15 in the population than at present. If no epidemics visited us in 1931-41, the proportion of children in our population in 1941 would be lower, and that of old men higher than in 1931.

EXPECTATION OF LIFE

The expectation of life in India is much shorter than in other countries.

At birth the expectation of life in India in the the case of a male child in 1901-10 was 22·59 years as compared with 43·97 years in Japan, 48·53 years in England and 45·84 years in Norway. The striking difference between the figure for India and those for other countries is due to our abnormal rate of infant mortality. But not only at birth but at all ages the expectation of life in India is less than in other civilized countries. The difference is not wholly accounted for by climate.

TABLE

EXPECTATION OF LIFE, MALES

Age	All-India 1931	England 1921	Age	All-India 1931	England 1921
0	26.91	55.02	50	14.31	21.36
10	36.38	54.64	60	10.25	14.36
20	29.57	45.78	70	6.35	8.75
30	23.60	37.40	80	3.13	4.93
40	18.60	29.36	90	1.12	2.82

The expectation of life in India in 1931 for all ages up to 80 was higher than in 1911. This would be regarded as a matter for satisfaction if we did not know that owing to the elimination of the weak and the unfit by the influenza epidemic of 1918-19 the population in the last decade contained an unusually high proportion of the fit and the strong. But the rapid growth of numbers in the last decade and the increase in the expectation of life are ephemeral phenomena, i.e., the progress will not continue in the decade 1931-41. If, as there is much reason to fear, the growth of numbers is cut short in this decade by epidemics, the expectations of life for 1931-41 will be lower than those for 1921-31.

The increase in the leading European countries has been steady and continuous. For example, the expectation of life at birth for a male child in Germany was 35.58 years in 1871-72, 37.17 years in 1881-90, 40.56 years in 1891-1900 and 47.41 years in 1910-11. The rise in the expectation of life in England and Wales between 1871 and 1921 is shown by the following table:

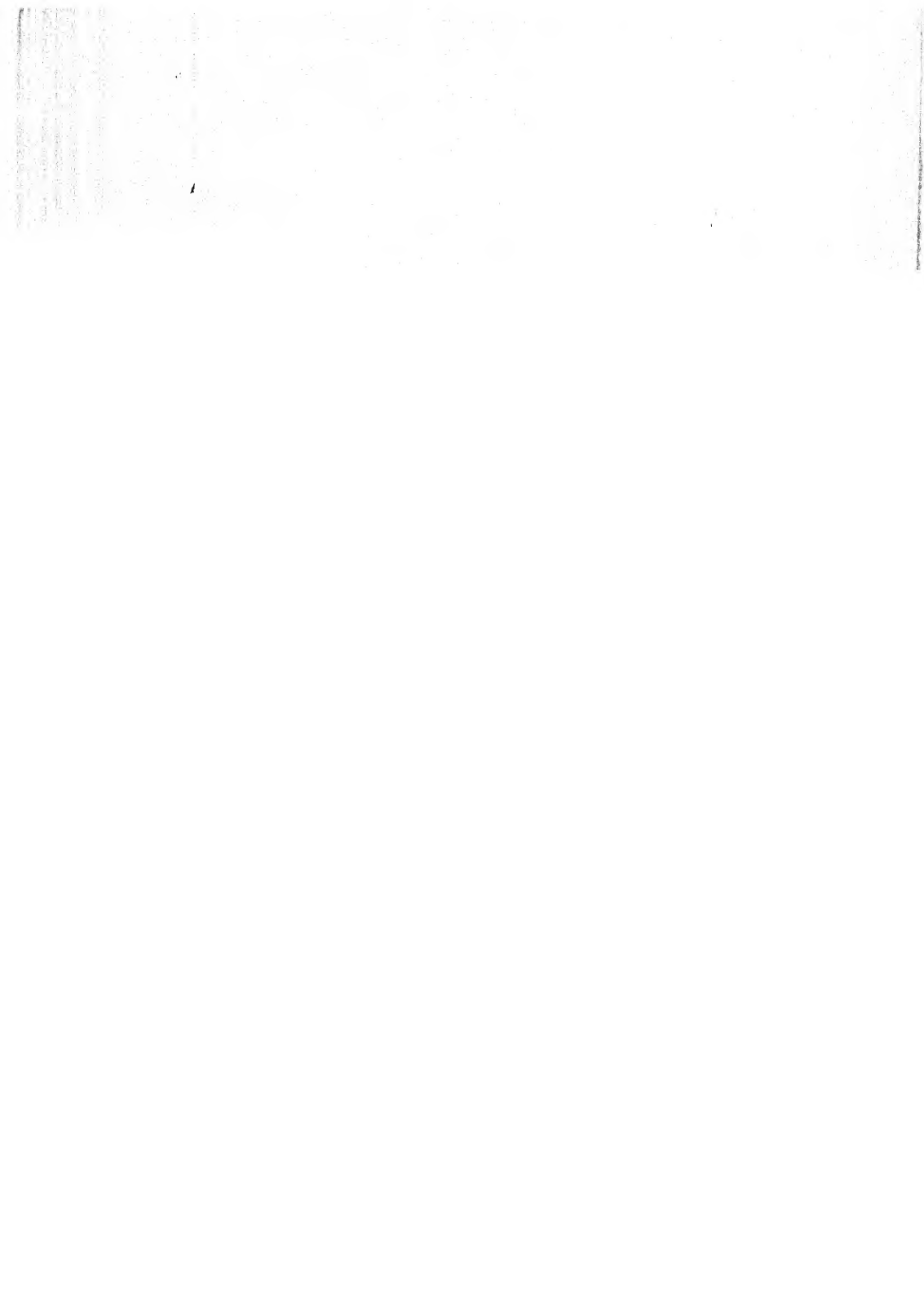
TABLE

EXPECTATION OF LIFE IN ENGLAND AND WALES

Age	Males		Females	
	1871	1921	1871	1921
0	.. 40.4	55.5	43.5	59.5
5	.. 49.8	58.8	51.9	61.7
25	.. 35.4	41.6	37.5	44.5
45	.. 22.3	25.3	24.1	27.8
65	.. 10.5	11.4	11.2	9.12

(Source: *Statistical Abstract for the United Kingdom, 1933*)





A progressive increase in the expectation of life is a sign of improvement in the material conditions of well-being, and is, therefore, a reliable index of prosperity. Such tests of prosperity are inapplicable to India, and therefore we are accustomed to measure the increase in our prosperity by such standards as the growth of the stamp revenue or increase in litigation, and the growth of the excise revenue or increase in drunkenness.

SEX RATIO

The deficiency of females at birth is a well-known phenomenon. In European countries the proportion of boys to girls is 104—106 boys to 100 girls. In India the ratio per cent of male to female births is about 108. In European countries, however, the death rate among females is much lower than among males, and consequently the proportion of females to males in the higher age-groups increases, and in the total population there is an excess of females over males. In India there is an excess of females over males (both in the case of Hindus and of Muslims) in the age-groups 0—5, 20—25, and 60 and over. In all other age-groups there is an excess of males over females. Taking all ages together there were, per 1000 males 954 females in 1911, 946 in 1921 and 940 in 1931.

A deficiency of females exists in all provinces, except Bihar & Orissa and Madras. The Central Provinces and Berar used to have an excess of females, but in 1931, this province also (for the first time) showed a slight deficiency of females (998, actual population).

Among the larger provinces the deficiency is greatest in the Punjab:

				Proportion of females to 1000 males
1881	..	..	..	844
1891	..	..	..	850
1901	..	..	..	854
1911	..	..	..	817
1921	..	..	..	828
1931	..	..	..	831

For the natural population of the Punjab the proportion was 819 in 1921 and 824 in 1931.

It is seen that this proportion increased from 1881 to 1901, and fell from 1901 to 1921. A slight improvement took place in the decade 1921-31.

The greater deficiency of females in the Punjab is not explained by deficiency at birth. The ratio per cent of male to female births in the Punjab (about 112) is indeed higher than the average for the whole of India, but Ajmer-Merwara shows a higher ratio than the Punjab, and the N.-W.F.P. beats all records in this respect with an average ratio of 129 male births to 100 female births in the last decade.⁹ And yet the deficiency of females in both Ajmer-Merwara and N.-W.F.P. is less than in the Punjab.

We get no explanation from the Census Commissioner, Punjab, (1931) of the fact, which he notes, that of the major Indian provinces the Punjab has the smallest proportion of females. He suggests that perhaps "the preponderance of males in the Punjab is due to its peculiar requirements"—the Punjab being "the gateway and sword-hand of India."¹⁰ But the N.-W.F. Province is the gateway and sword-hand of India in a still superior sense. How exactly the peculiar requirements of the N.-W.F. Province affect the ratio of male to female births in that province is not known, but it is impossible to believe that fewer women as compared with N.-W.F. Province survive in relation to males in the Punjab on account of the political requirements of the Punjab.

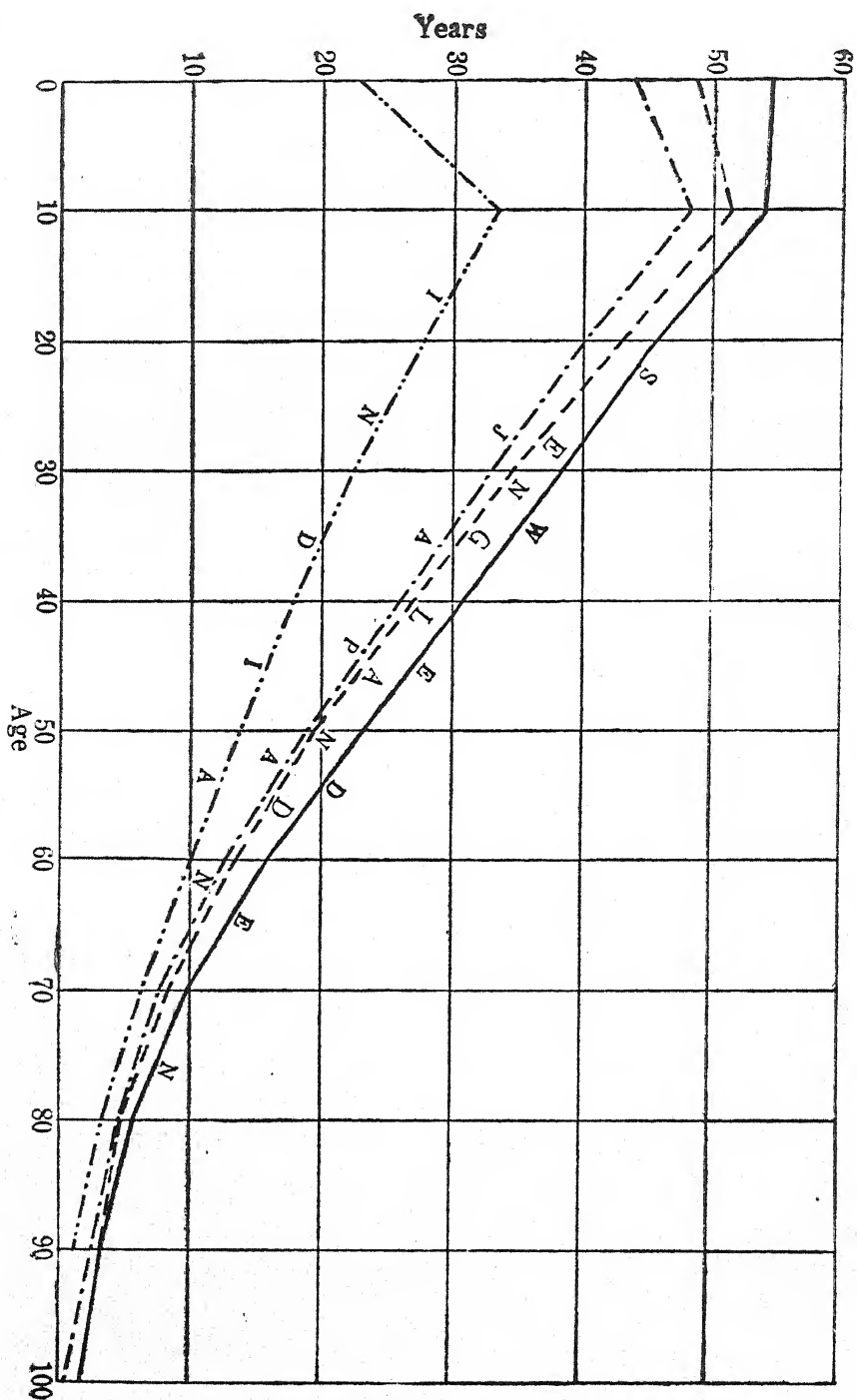
The only possible explanation is that conditions of life are harder for women than for men in the Punjab, as also in other provinces where a deficiency of females exists.

The deficiency of females at birth is not a satisfactory explanation, for, as we have seen, such deficiency is a universal phenomenon. A higher death rate among boys who are constitutionally more delicate than girls, equalizes the proportions of the two sexes in

⁹ The proportion for N. W. F. Province is absurdly high and unreliable. It is due to defective registration of female births. See Report for N. W. F. P., 1931 Census, p. 79.

¹⁰ Punjab Report, 1931, p. 159.

CHART No. 10 SHOWING THE EXPECTATION OF LIFE AT DIFFERENT AGES.



MOVEMENT OF THE POPULATION AND CIVIL CONDITION

Europe by the time adolescence is reached and at the age of 4 or 5 in India. After that, in European countries, mortality among males remains relatively high on account of their harder life, which is more exposed to risk than that of females. It is otherwise in India, and particularly in the Punjab.

In the Punjab fewer females die up to the age of 5. Thereafter for all age-groups including 60 and over the ratio of female to male deaths is higher as shown by the table given below. Figures for N.-W.F. Province are added for the sake of comparison:

FEMALE DEATHS PER 1,000 MALE DEATHS

Age		Punjab ¹¹	N.W.F.P. ¹²
0—1	.. ..	968	764
1—5	.. ..	980	896
5—10	.. ..	1,083	865
10—15	.. ..	1,250	890
15—20	.. ..	1,267	921
20—30	.. ..	1,154	1,072
30—40	.. ..	1,200	991
40—50	.. ..	1,045	873
50—60	.. ..	1,000	774
60 or over	.. ..	1,082	724

That the Punjab should have a higher ratio of female to male deaths than the N.-W.F. Province is thoroughly disgraceful.

How can the sex ratio be improved? The political requirements of the province have nothing to do with the question. It is a question of taking proper care of female children, of raising the age of marriage, of avoiding too frequent births, of abandoning primitive methods of midwifery, of educating women and of treating widows better.

MARRIAGE

The Census returns relating to marriage for 1931 are extraordinary, and such as we might well be ashamed of. Taking all

¹¹ Punjab Report, 1931, p. 158.

¹² N. W. F. P. Report, 1931, p. 57.

INDIA BEFORE AND SINCE THE CRISIS

religions together the proportion of the married of ages under 15 per 1,000 of each sex gradually declined from 1891 to 1921:—

MARRIED PER 1,000 OF EACH SEX

		Males, Ages			Females, Ages		
		0—5	5—10	10—15	0—5	5—10	10—15
1931	..	16	79	149	30	193	381
1921	..	6	32	116	11	88	382
1911	..	7	37	129	14	105	430
1901	..	7	36	134	13	102	423
1891	..	6	36	154	13	123	495

But the figures suddenly shot up in 1931. The combined numbers for age 0—15 are given below:—

NUMBER OF MARRIED PER 1,000 OF THOSE AGED 0—15 YEARS

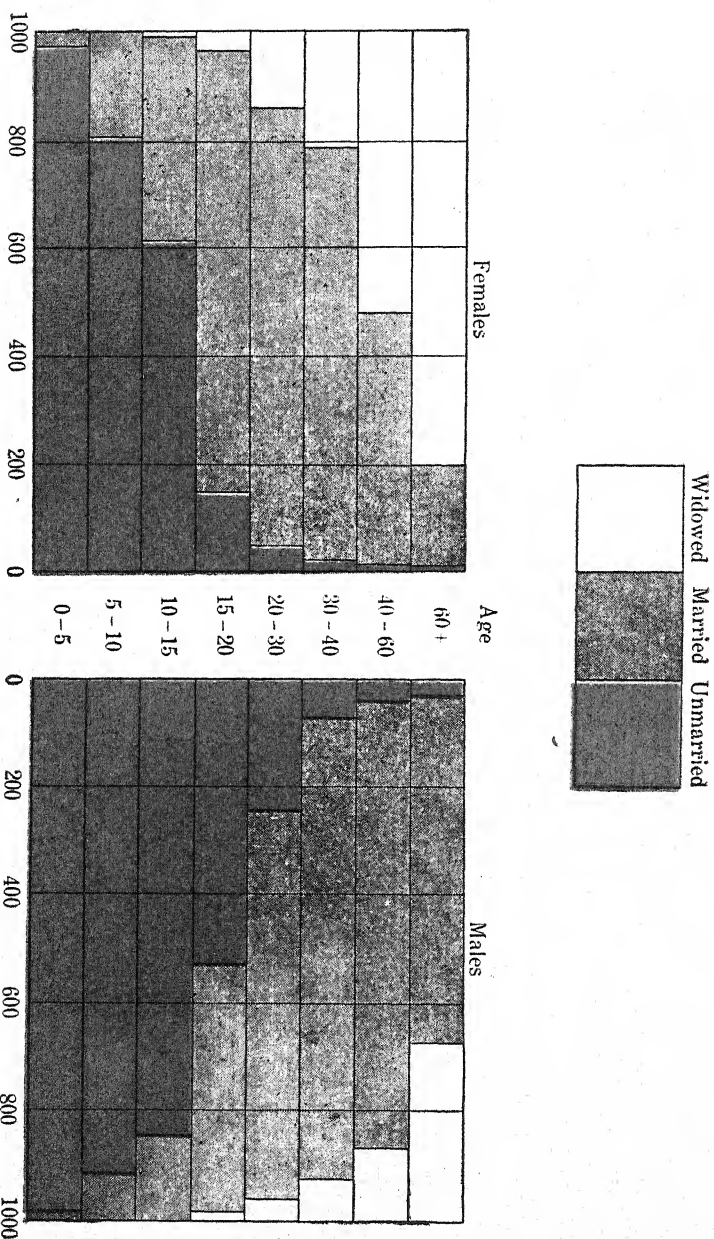
			Males.	Females.
1881	..	..	63	187
1891	..	..	59	170
1901	..	..	59	162
1911	..	..	54	156
1921	..	..	51	144
1931	..	..	77	181

The Sarda Act came into force a year before the Census, and hence the rush to marry off children. The figures show the powerful hold of custom and religion on orthodox Hindus and Muslims—there was a parallel increase in the ratio of married children of both communities.

Dr. Hutton believes that at the Census there was an attempt to conceal the age of girls married below 15. He estimates the lowest ratio of females aged 0-15 who are married at 196 per 1,000 instead of the census ratio of 181 per 1,000. About one-fifth of the total number of females were married at an age below 15.

In most European countries the percentage of men who marry below the age of 20 is insignificant. The average age of first

CHART No. 11



SHOWING THE PROPORTION OF THE UNMARRIED, MARRIED AND THE WIDOWED IN THE
POPULATION OF INDIA (1931).

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

marriage in the case of males and females in various countries is shown below:—

		Year	Men. Age	Women. Age
Germany ..	..	1913	27·5	24·7
France ..	..	1906—10	28·0	23·7
Italy ..	..	1911—14	27·2	23·6
Switzerland	..	1901—10	28·3	25·8
England and Wales	..	1906—14	27·4	25·7
Scotland ..	..	1906—14	27·8	25·8
Netherlands	..	1906—15	27·6	25·8
Sweden ..	..	1906—13	28·8	26·4

The highest proportion of men who marry (first marriage) in Europe are between the ages 25-29 and women between 20-24.

The proportion of widows to the population is much higher in India than in European countries. The privilege which Hindu widowers enjoy of remarrying, denied to widows, explains the high proportion of Hindu widows, aged 15-40, 124 per 1,000, as compared with the figures for widowers—43. The corresponding figures for Bengal are widows 210, widowers 31, and for Muslims of India, widows 91 and widowers 36.

TOWNS AND VILLAGES

At the first general census of India in 1881 a town was defined as a "collection of habitations where the inhabitants exceed 5,000, but are less than 50,000"—habitations where more than 50,000 persons lived were classed as 'cities.' All places containing less than 5,000 persons were treated as 'villages'.

90·9 per cent. of the total population lived in villages and 9·1 per cent in town as defined above. "Thus there are 10 villagers to every 1 townsman, the proportion in England being 1:2," wrote the Census Commissioner.

At the census of 1891 the definition of a town was extended so as to include many of the smaller municipalities and other areas

which would have been classified as villages if the numerical standard of 5,000 had been strictly adhered to.

A uniform definition of a 'town' has been used since 1901. A town includes (1) every Municipality of whatever size, (2) all civil lines not included within municipal limits, (3) every cantonment, (4) every other continuous collection of houses, permanently inhabited by not less than 5,000 persons, which the Provincial Superintendent may decide to treat as a town for census purposes.

Overgrown villages, even possessing a population of more than 5,000, are not classed as towns. To be treated as a town, a place with a population of more than 5,000 must possess urban characteristics. In making their decision, the Census Superintendents are instructed to take into consideration "the character of the population, the relative density of the dwellings, importance in trade and historic associations."¹³

Towns of not less than 100,000 inhabitants are treated as 'cities.'

Between 1911 and 1921 the population of towns of above 50,000 increased 16 per cent, of towns of 20,000 to 50,000, 7.6 per cent, while that of towns of 10,000 to 20,000 increased by only 0.7 per cent. The growth of the larger towns was thus at the expense of the medium-sized towns. In Western India, which is industrially more advanced than any other part of India, the types of places which lost to the cities were "not the smaller villages but the middle-sized country towns."¹⁴

RURAL AND URBAN POPULATION, 1901—1931, FIGURES IN 1,000

	1901	1911	1921	1931
Class I. 100,000 & over	6,635	7,076	8,212	9,674
Class II. 50,000—100,000	2,931	3,010	3,518	4,572
Class III. 20,000— 50,000	5,474	5,546	5,969	8,091
Class IV. 10,000— 20,000	5,975	6,164	6,221	7,449
Class V. 5,000— 10,000	5,993	5,945	6,223	6,993
Class VI. Under 5,000 ..	2,176	2,008	2,333	2,206
Total Town population ..	29,184	29,748	32,475	38,985
Rural Areas ..	265,117	285,408	286,467	313,852

¹³ Census Report, India, 1931, p. 45.

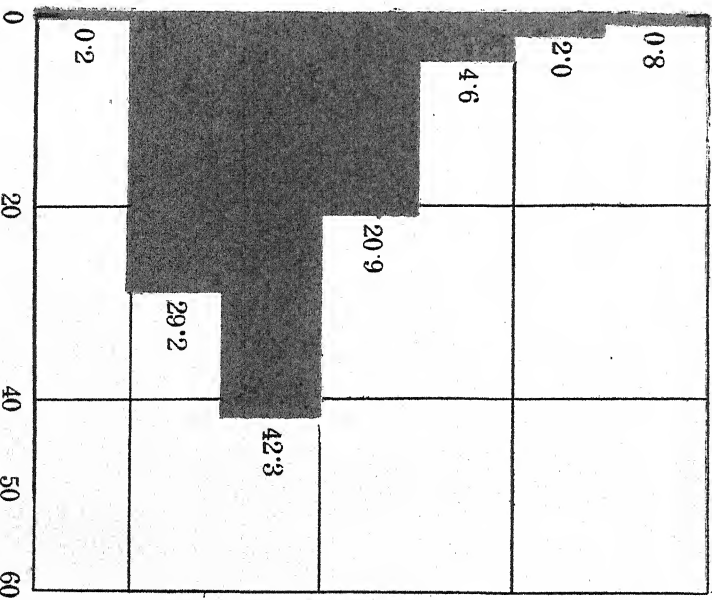
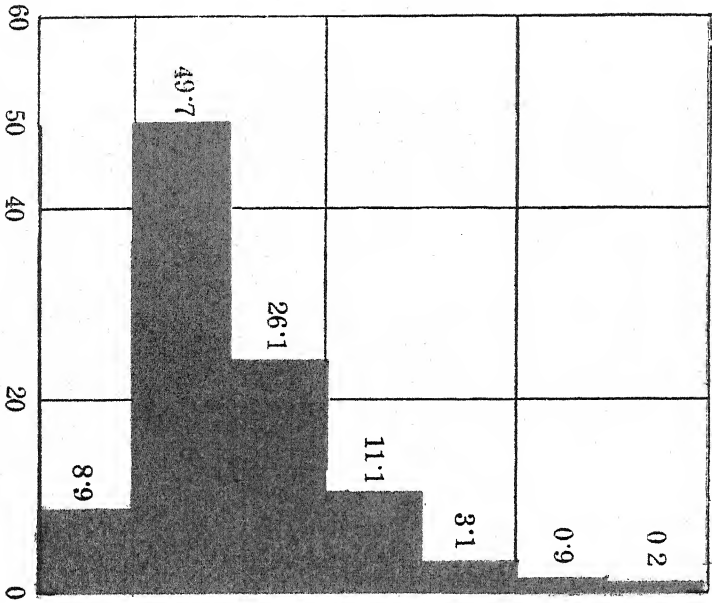
¹⁴ Census Report, India, 1921, p. 66.

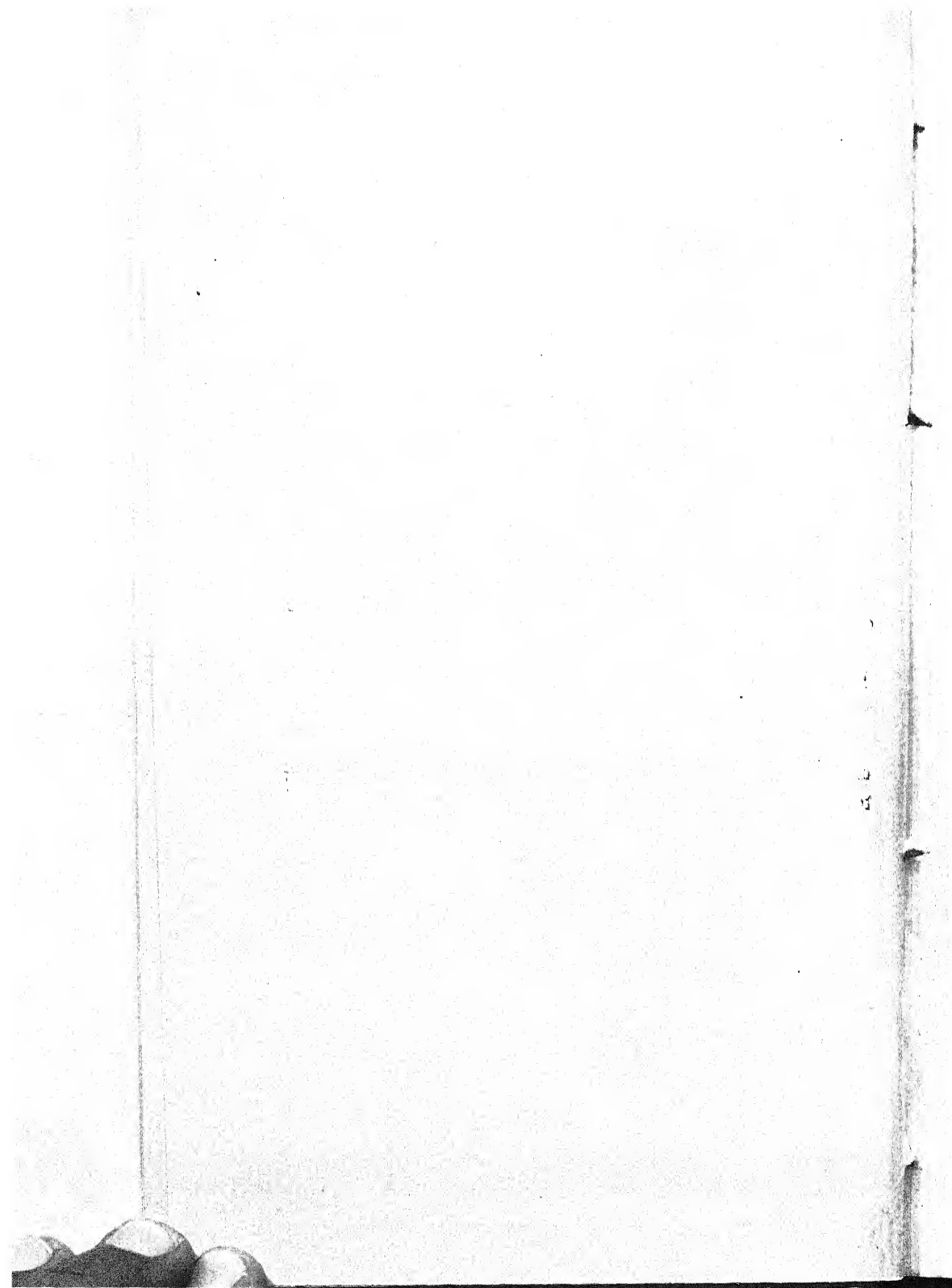
CHART No. 12

Women

Germany (1913)

Men





MOVEMENT OF THE POPULATION AND CIVIL CONDITION

NUMBER OF TOWNS AND VILLAGES

Towns ..	..	1901	1911	1921	1931
Class I ..	..	31	30	35	38
Class II ..	..	52	45	54	65
Class III ..	..	167	181	200	268
Class IV ..	..	471	442	451	543
Class V ..	..	857	848	885	987
Class VI ..	..	570	607	691	674
	..	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL ..	..	2,148	2,153	2,316	2,575
	..	<hr/>	<hr/>	<hr/>	<hr/>
(Villages) ..	..	728,605	720,342	685,665	696,831

Between 1921 and 1931 the population of towns of 20,000—50,000 increased most rapidly. Their population is now about double that of towns of 50,000 to 100,000, and is only a little less than the total population of 38 cities. The number of towns was increased in 1931 by the treatment of cantonments as separate entities; formerly they were included in the adjoining towns.

Between 1901 and 1931 the town population increased by 34 per cent and the village population by 19 per cent. In spite of the larger percentage growth of the town population, due to the growth of trade and industry, it is not possible to speak of any urbanisation in India. 11 per cent of the total population lived in towns in 1931, an increase of 0·8 per cent as compared with 1921, and 1·5 per cent as compared with 1891.

URBAN AND RURAL POPULATION: PER CENT OF TOTAL

			Urban	Rural
1891 ..	..	..	9·5	90·5
1901 ..	..	..	9·9	90·1
1911 ..	..	..	9·4	90·6
1921 ..	..	..	10·2	89·8
1931 ..	..	..	11·0	89·0

The fall in the proportion of the urban population in 1911 is explained by plague, from which towns suffered more than rural

areas. At the time of the census of 1911 the epidemic was raging in several provinces and a large number of the regular inhabitants of many towns had gone away.

The growth of towns is dependent upon the growth of industries. In view of the very slow development of Indian manufacturing industries it is not surprising that the progress of urbanisation in India is slow. This progress has been very rapid in European countries, such as Germany, which is explained by their rapid industrialisation. In 1800 about 90 per cent of the population of Germany lived in places with less than 5,000 inhabitants, and only 10 per cent in towns. The growth of the town population, particularly the population of cities, became rapid after 1850 and the pace increased after 1870. In 1850 there were in Germany only 5 towns with more than 100,000 inhabitants, 8 in 1870 and 48 in 1910. Between 1871 and 1910 the town population of Germany increased from 14·8 millions (36·1 per cent of the total population) to about 39 millions (60·0 per cent) and the rural population decreased from 26·2 millions (63·9 per cent) to 25·95 millions (40·0 per cent).

The growth of the larger towns in Germany has not been, as in India, at the expense of the medium-sized towns, but chiefly at the expense of the villages. Between 1871 and 1910 the percentage of the population living in country towns decreased from 12·4 to 11·24 and that of rural territory (places with less than 2,000 inhabitants), decreased from 63·9 to 39·98 per cent while the percentage of the population living in large towns (over 100,000) increased from 4·8 to 21·28 per cent.

In Austria 91 per cent of the population in 1843 lived in places with less than 5,000 inhabitants, and 9 per cent in towns of over 5,000. In 1910 the proportions were 72·8 and 27·2. Between 1851 and 1911 the town population of France increased from 25·5 per cent of the total population to 44·2 per cent. The percentage of the population living in towns (more than 8,000 inhabitants) in the United States of America increased from 3·35 in 1790 to 29·20 in 1890. Taking a town to be a place with more than 2,500 inhabitants, the percentage of the population of the United States

living in towns increased from 40·5 per cent in 1900 to 46·3 per cent in 1910. 9·2 Per cent of the total population of the United States in 1910 lived in towns of more than 1,000,000 and 22·1 per cent in towns of more than 100,000 (Germany 21·28).

HOUSING

The housing conditions in some of our cities are far from satisfactory. They are terrible in Bombay, the centre of the textile industry. "At least 36 per cent of the population of the city," says Dr. Hutton, "suffer from gross over-crowding."¹⁵

About 8 lakhs of persons or 74 per cent of Bombay's population live in one-roomed tenements. Of these 2½ lakhs live in rooms occupied by 6—9 persons each, 80,133 in rooms of 10—19 persons each and 15,490 in rooms occupied by 20 or more persons to each room.

The average density of a London County Borough is 37,568 persons to the square mile; the maximum density is in Southwark—97,088 to the square mile. Bombay's density is 48,000, of Delhi City (Municipality) 58,273, and of Sikandarabad (U.P.) 63,552 per square mile. These average densities convey little idea of the congestion in certain parts of our towns. Three wards of Peshawar have densities of 121,600, 131,840 and 188,800 per sq. mile respectively; 177,000 persons live in the old walled city of Lahore at a density of 198,500 persons per square mile!

In view of such congestion, and the dirt, filth and squalor in our towns, it is not surprising that epidemics, when they appear, spread very rapidly, and are so difficult to cope with.

LITERACY

How do we stand in the matter of illiteracy as compared with other countries? We lead the world.

¹⁵ Report, 1931, p. 52.

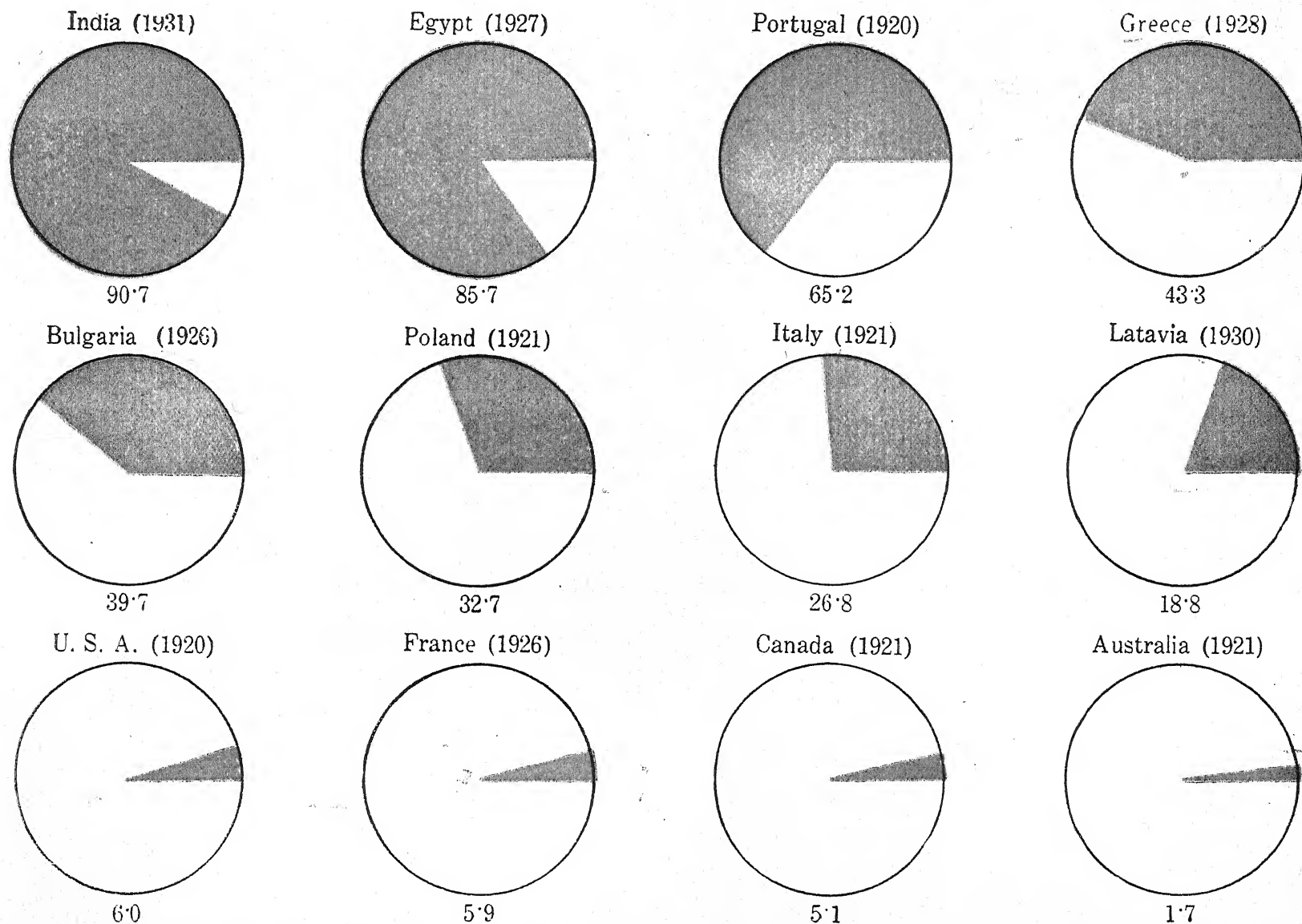
INDIA BEFORE AND SINCE THE CRISIS

ILLITERACY ACCORDING TO CENSUS RETURNS. ALL AGES 10 AND OVER

Per cent of total

		Year	Males Per cent	Females Per cent	Persons Per cent
AFRICA—					
Egypt	..	1927	76·9	95·3	85·7
AMERICA—					
Canada	..	1921	5·7	4·4	5·1
U. S. A.	..	1920	6·0	5·9	6·0
Mexico	..	..	61·7	67·6	64·9
ASIA—					
India	..	1921	83·9	97·7	90·6
U. S. S. R.	..	1926	33·1	62·9	48·7
EUROPE—					
Belgium	..	1920	6·6	8·4	7·5
Bulgaria	..	1926	25·3	53·9	39·7
Spain	..	1920	35·0	50·2	43·0
Estonia	..	1922	7·2	14·0	10·8
France	..	1926	5·1	6·7	5·9
Greece	..	1928	25·4	60·5	43·3
Hungary	..	1920	10·3	15·3	13·0
Italy	..	1921	23·3	30·0	26·8
Latavia	..	1930	12·2	24·3	18·8
Lithunia	..	1930	30·7	34·4	32·7
Poland	..	1921	29·4	35·7	32·7
Portugal	..	1920	56·8	72·8	65·2
OCEANIA—					
Australia	..	1921	2·1	1·2	1·7

CHART No. 13



SHOWING THE PROPORTION PER CENT OF ILLITERATE PERSONS (COLOURED PORTION) IN DIFFERENT COUNTRIES, ALL AGES, 10 AND OVER.

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

In 1921 with 83·9 per cent of illiterate males and 97·7 per cent of illiterate females we led the world. The position did not change in 1931. The proportions for India for 1931 are 82·6 per cent illiterate males (of all ages 10 and over) and 96·9 per cent of females of the same ages. The following table shows the number of literates of ages 5 and over.

		India. Millions	Provinces. Millions
TOTAL POPULATION	..	296·3	230·0
Males	..	153·8	119·4
Females	..	142·5	110·6
LITERATE	..	28·1 (9·5%)	22·7 (9·9%)
Males	..	23·9	19·5
Females	..	4·2	3·2
LITERATE IN ENGLISH	..	3·7 (1·3%)	3·1 (1·4%)
Males	..	3·3	2·8
Females	..	0·4	0·3

STATISTICAL APPENDIX

TABLE I

VITAL STATISTICS. BRITISH INDIA

			Ratio of births per 1000 of population	Ratio of deaths per 1000 of population	Ratio per cent of male to female births.
1921	..	..	32·20	30·59	108·05
1922	..	..	31·85	24·02	109·09
1923	..	..	35·06	25·00	108·00
1924	..	..	34·44	28·49	108·1
1925	..	..	33·65	24·72	108·1
1926	..	..	34·77	26·76	107·7
1927	..	..	35·27	24·89	107·9
1928	..	..	36·79	25·59	108·0
1929	..	..	35·47	25·95	107·9
1930	..	..	35·99	26·85	107·9
1935	..	..	34·90	23·60	108·0

INDIA BEFORE AND SINCE THE CRISIS

TABLE II

INFANT MORTALITY PER 100 BIRTHS

			Males	Females
1921	..	..	20·5	19·0
1922	..	..	18·3	16·6
1923	..	..	18·3	16·8
1924	..	..	19·7	18·0
1925	..	..	18·1	16·7
1926	..	..	19·7	18·0
1927	..	..	17·4	15·9
1928	..	..	18·1	16·4
1929	..	..	18·5	16·9
1930	..	..	18·9	17·2
1935	..	..	16·6	15·2

TABLE III

RATIO OF DEATHS PER 1,000 OF THE POPULATION

			In towns	In rural districts
1918	..	..	56·76	62·98
1921	..	..	33·33	30·32
1922	..	..	27·41	23·00
1923	..	..	29·27	24·58
1924	..	..	31·66	28·18
1925	..	..	29·21	24·27
1926	..	..	32·52	26·19
1927	..	..	29·05	24·48
1928	..	..	30·08	25·15
1929	..	..	31·42	25·41
1930	..	..	30·11	26·52
1935	..	..	25·30	23·40

(Source: *Statistical Abstract for British India. Vital Statistics.*)

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

TABLE IV

BIRTH AND DEATH RATIO IN DIFFERENT COUNTRIES.

PER 1,000 OF THE POPULATION OF 1930.

	Birth rate	Death rate	Annual rate of excess of births	Annual marriage rate	Deaths under 1 Yr. per 1000 living births.
Egypt ..	45·7	25·0	20·7	..	151
U. S. A. ..	18·9	11·3	7·6	9·1	65
British India ..	32·9	24·5	8·4	..	180
Japan ..	32·4	18·2	14·2	7·9	124
Germany ..	17·5	11·1	6·4	8·7	85
France ..	18·0	15·6	2·4	8·2	78
Italy ..	26·7	14·1	12·6	7·4	106
Holland ..	23·1	9·1*	14·0	8·0	51*
United Kingdom	16·8	11·7	5·1	7·8	63
Roumania ..	35·0†	19·4†	15·6	9·3	176‡
Sweden ..	15·4*	11·7	3·7	7·1	55

TABLE V

SIZE OF FAMILY BY OCCUPATION OF HUSBAND.

ALL-INDIA

	Average number of children born per family	
Total of all classes	4·3
Cultivating owners	4·4
Agricultural labourers	4·3
Industry	4·2
Public Administration	3·9
Professions and Liberal Arts	4·3
Religion	5·2
Law, medicine and instruction	3·7

* Lowest in Europe.

† Highest in Europe.

‡ Highest in Europe, excluding Malta (297 per 1000).

INDIA BEFORE AND SINCE THE CRISIS

TABLE VI

SIZE OF FAMILY BY COMMUNITY OR RELIGION OF FAMILY

				Average number of children born per family
Total	..	..	..	4.2
Hindu	..	..	..	4.3
Sikh	..	..	..	4.1
Jain	..	..	..	4.2
Buddhist	..	..	..	3.8
Parsi	..	..	..	4.6
Muslim	..	..	..	4.1
Christian	..	..	..	4.0
Tribal	..	..	..	5.0

TABLE VII

SIZE OF FAMILY BY PROVINCES AND STATES*

				Average number of children born per family
Total	..	..	..	4.2
Baroda State	..	..	..	5.7
Bengal	..	..	..	6.0
Bombay	..	..	..	4.0
C. I. Agency	..	..	..	3.5
C. P. & Berar	..	..	..	4.0
Cochin State	..	..	..	3.8
Gwalior State	..	..	..	6.2
Jammu & Kashmir State	..	..	..	5.7
Mysore State	..	..	..	4.4
Punjab	..	..	..	3.9
Delhi	..	..	..	3.5
Travancore State	..	..	..	6.5

* No information is available about the United Provinces, Madras and N. W. F. Province. The source of these statistics is Fertility Tables given as Appendix I to Census of India, 1931, Vol. I, Part II (Tables).

MOVEMENT OF THE POPULATION AND CIVIL CONDITION

TABLE VIII

POPULATION OF CAPITAL TOWNS IN 1,000

	1931	1901	1872
Calcutta ..	1,193	848	633
Patna ..	160	135	159
Bombay ..	1,161	776	644
Madras ..	646	509	398
Rangoon ..	399	235	99
Allahabad ..	174	172	144
Delhi ..	447	209	154
Lahore ..	400	203	125
Nagpur ..	215	128	84
Peshawar ..	87	95†	77†
Agra ..	205	188	149

† Includes cantonment.

CHAPTER III

THE MALTHUSIAN DOCTRINE AND OVER-POPULATION

In book II, Chapter XIII of his *Essay on Population* Malthus thus summed up his conclusions regarding the growth of numbers:—

“The increase of population is necessarily limited by the means of subsistence:

“Population invariably increases when the means of subsistence increase, unless prevented by powerful and obvious checks:

“These checks, and the checks which keep the population down to the level of the means of subsistence, are moral restraint, vice and misery.”

This Natural Law of the growth of population, as Malthus regarded it, has not been universally accepted. Malthus' doctrine found many opponents in his own time, and in more recent times, that is, towards the close of the 19th and the beginning of the 20th century. Malthus has been severely criticised by economists of note in Germany and elsewhere. One of them, Dr. Franz Oppenheimer, goes so far as to say that Malthus' *Essay* is not a work of genuine scholarship, that there is in Malthus a complete lack of logical ability, and that it is almost a physical torment to wade through the *Essay* with its endless repetitions, etc.* He gives two reasons to explain the popularity of the Malthusian doctrine and the importance which it acquired. Firstly, the theory absolved the bourgeoisie from all blame for the crying misery of the working classes, and made a Natural Law responsible for it. Secondly, Malthus has been misinterpreted, and the theory which

* Das Bevölkerungsgesetz des T. R. Malthus und der neuen Nationalökonomie, by Dr. Franz Oppenheimer, p. 64.

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is taught in his name in Germany is not altogether devoid of sense—it is an opponent worthy of Oppenheimer's steel, whom he proceeds to demolish.

Karl Marx preceded Oppenheimer in condemning the Natural Law of Malthus as a partisan doctrine. It suited the interests of the ruling classes whom Malthus glorifies, says Marx, to explain overpopulation as the result of the eternal laws of nature, rather than of the historic natural laws of capitalistic production.*

On the other hand, the Malthusian doctrine has found many supporters in all countries, the most prominent among them being John Stuart Mill (1806—1873) in England, Say (1767—1832), Sismond's (1773—1842) and Quetelet (1796—1874) in France, and Rau (1792—1870) and Robert von Mohl (1799—1875) in Germany. As regards the influence of this theory it will be sufficient to say that the reformed English poor law of 1834 was the result of Malthus' teaching, and that in Germany, Austria and Switzerland legislation was enacted in the first half of the 19th century with the object of discouraging marriages among the working classes, permission to marry being given, as in Württemberg, only if it could be shown that the couple intending to marry possessed adequate means of subsistence.

In England Dr. Marshall accepted the Natural Law of Malthus, and gave him "a place among the founders of historical economics." He held that the second and third steps of Malthus' argument though "antiquated in form" were "still in a great measure valid in substance," and concluded:

"It remains true that unless the checks on the growth of population in force at the end of the 19th century are on the whole increased (they are certain to change their form in places that are yet imperfectly civilized) it will be impossible for the habits of comfort prevailing in Western Europe to spread themselves over the whole world and maintain themselves for many hundred years."

* *Das Kapital*, p. 466 (Kautsky's edition of 1914).

Assuming the population of the world to-day to be one and a half thousand millions and the rate of increase to be 8 per 1,000 annually, Dr. Marshall calculated that in less than 200 years the population of the world will amount to 6,000 millions. Allowing for improvements in the arts of agriculture, Dr. Marshall thought that "the pressure of population on the means of subsistence may be held in check for about 200 years but not longer."*

Similar calculations have been made by others.

The question of food supply is no longer local, as it was in India before the opening up of the country by the railway and the linking up of our ports with foreign ports by means of the steamship. A local shortage of food can be easily remedied by imports. An industrial country need not depend on her own production for feeding her population. India may import food as easily as any industrial country, provided she has the means of paying for the imports.

With the enormous increase in the world-production of food and the improvement and cheapening of the means of transportation, the meaning of the word famine has changed.

Malthus admitted that the principle of population could not absolutely produce a famine, but, he insisted, "it prepares the way for one, and by frequently obliging the lower classes of people to subsist nearly on the smallest quantity of food that will support life, turns even a slight deficiency from the failures of the seasons into a severe dearth; and may fairly be said to be one of the principal causes of famine."¹ That was true of the past. It is no longer true to-day; any famine-stricken part of India can easily import food from other parts, or from foreign countries. Poor people may still die of want, or be carried off by cholera and 'fevers' which follow in the wake of famine. But they do not die because of lack of food. They lack the means of buying it—which is different.

The amount of food is determined by physical conditions governing production, the ability to buy it and by the distribution

* *Principles of Economics*, p. 180.

¹ *Essay*, Bettany's ed. (1880), p. 290.

of wealth. Malthus' principle of population was based on the quantity of food produced relatively to the growth of numbers. The principle of population which is in operation in India at the present time has more reference to the distribution of wealth and income than to the amount of food produced by India.

The growth of numbers in Germany and France since 1880 has been in defiance of the Malthusian law. With the help of facts and figures Prof. Paul Mombert has conclusively shown² that between 1880 and 1910 the economic development of Germany was proceeding more rapidly than the growth of numbers, and that in consequence the standard of living of the population rose. The economic progress of France in this period was slower than that of Germany, but still the rate of progress was more rapid than the growth of numbers. The increase of population amounted to a bare 2 millions in France, while it exceeded 22 millions in Germany.

The figures for the United States for the period 1849—99 are still more significant.³ The population increased from 23·3 millions to 76·1 millions (about 3·3 times), labourers employed in manufacturing industries from 937,000 to 5,306,000 (about 5·7 times), the work done by machines from 2,346,000 horse-power in 1869 to 10,098,000 horse-power in 1899 (4·3 times) and the value of industrial production from 1,051,000 dollars in 1849 to 15,476,000 dollars in 1899 (about 15 times). In view of these facts it is impossible to maintain that when means of subsistence increase, the population must increase so rapidly as to press against them, unless "prevented by obvious and powerful checks." In progressive countries no such law is in operation. The growth of numbers may be accompanied by a constantly rising standard of living.

Then, as we have seen, the rise in the standard of living calls psychological forces into operation which tend to reduce the birth rate. The fall in the birth rate in Western Europe has not been produced by the Malthusian law. It is the product of a particular

² *Bevoelkerungsentwicklung und Wirtschaftsgestaltung*, Leipzig, 1932, Chapter III.

³ *Ibid.*, p. 17.

mentality—of the capitalist spirit, as Dr. Ungern-Sternberg puts it.⁴

RELATIVE AND ABSOLUTE OVERPOPULATION

Referring to the increase in numbers which is made possible by the growth of trade and industry and other factors Schmoller said:

"In view of what has been said above it will be readily admitted that there was no overpopulation in the absolute sense at any time in the past, nor is there overpopulation in this sense at the present time, in so far as we understand by that term a population which cannot live in its territory in spite of a most complete and rapidly progressing technique, transportation system, colonisation, and moral and social organisation. These assumptions were almost never or only very rarely realised. The practical question essentially is that of actual or threatened relative overpopulation, i.e., such density of population as would make its pressure felt in view of the existing conditions of life and economic prospects."⁵

It is impossible to say whether any country, or any province of India, is overpopulated in the absolute sense. Japan maintains a population of 64,450,000 on an area of 382,000 sq. km., or a population equal to that of Germany on an area 19 per cent less than that of Germany (469,000 sq. km.) Is Japan overpopulated in the absolute sense? Who can say? If she is able to acquire more Chinese territory, if her trade and industry continue to grow as they have done since the war, Japan may well be able to support a population of 100 millions at a higher level of comfort and efficiency than at present. Bengal has a population of 50 millions, but, as the Census Superintendent of Bengal suggests, she might support a population of 100 millions without any fall in the standard of living if the total cultivable area were brought under cultivation and the yield per acre increased 30 per cent. Conceivably scientific cultivation may double the present yields; conceivably the industrial output may be quadrupled. Bengal is not overpopulated in the

⁴ Ungern-Sternberg regards social ambition, a product of the capitalist spirit, as *causa causans* of the fall in the birth rate. See *Die Ursachen des Geburtenrückganges in europ. Kulturkreis*, p. 319.

⁵ *Grundriss der allgemeine Volkswirtschaftslehre*, 1920, Vol. 1, p. 189.

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absolute sense. The question of the optimum population that a country can support can never be answered definitely, for the possibilities of economic development, colonisation and commercial expansion cannot be exactly estimated.

A more practical question, as Schmoller said, is that of relative overpopulation, or overpopulation with reference to existing economic conditions. Now economic conditions are constantly changing: there are swings of prosperity and adversity, of economic advance and retrogression. It follows that overpopulation in the relative sense is a phenomenon which is constantly appearing and constantly disappearing.

It has been suggested that the term 'temporary' overpopulation may be used in place of relative overpopulation, since it can never be said that overpopulation under any given economic conditions is a permanent phenomenon.⁶ Mombert says:⁷

"All phenomena of overpopulation, whatever be their causes, are of a temporary nature. We can never say that overpopulation is permanent because we are able to form no idea of its further development."

But the word 'temporary' may mean various things—a very short, or a very long period. Over or under-population due to an unfavourable conjuncture will be of a very short duration. Such over- or under-population Mombert prefers to call 'fluctuating over- or under-population.' He contrasts this with temporary over- or under-population of longer duration which is connected with problems of wealth-production. Fundamental changes in the structure of industry exercise a more enduring influence on the movement of population than changes due to conjunctural oscillations of demand.

THE MALTHUSIAN LAW AND INDIA

We have seen that the growth of numbers in the progressive countries of Europe and in the United States of America during

⁶ *Bevoelkerungslehre* by Prof. Paul Mombert, Jena, 1929, p. 264

⁷ *Bevoelkerungsentwicklung und Wirtschaftsgestaltung*, pp. 7-8.

the past 50 years or more has not been governed by the Malthusian Law. What is the situation in India?

The main facts regarding the population of India are known to the reader. Our birth and death rates are high. The pressure on agricultural resources is steadily growing. Marriage is universal and the production of children uncontrolled. A great majority of the population lives not only near the margin of bare subsistence but below it. The reaction to disease is extravagant. And, finally, the movement of population is very peculiar, rapid increase in one decade being followed by much slower increase or practically no increase in the following decade.

Anyone who considered these facts would unhesitatingly declare that the Malthusian principle was at work in India.

Malthus' references to India form some very interesting reading. Evidently Malthus had no direct knowledge of India, his information about customs relating to marriage in India being derived from Sir William Jones' translation of Manu's *Dharm Shashtra*. He refers to the strict precepts relating to the government of the passions in Manu, and among the preventive checks to population he mentions the division of the people into classes or castes, and the difficulty of changing the traditional occupation of the cast. He takes note of the custom that the elder brother must marry before younger brothers are allowed to marry, and of the difficulty with which the choice of a wife is attended, considering that, according to Manu, girls with too little or too much hair, who are too talkative, who have bad eyes, a disagreeable name or any kind of sickness, who have no brother or whose father is not well known, and many others, are to be avoided. Malthus concluded that the preventive check was not absent in India. But he observed that early marriage was the rule in India, which led every person to marry "who could look forward to the slightest chance of being able to maintain a family." "The natural consequence of this was," he continues, "that the lower classes of people were reduced to extreme poverty, and were compelled to adopt the most frugal and scanty mode of subsistence. . . . The population would thus be pressed hard against the limits of the means of subsistence, and the

food of the country would be meted out to the major part of the people in the smallest shares that could support life."*

In such a state of things the population would suffer terribly in seasons of scarcity of food, and in epidemics which Malthus regarded as "the consequences of indigence and bad nourishment." The positive checks to population would chiefly affect the lowest class.

As regards disease, Malthus pointed out that the principal victims were always the lower classes, who were badly nourished and who lived crowded together in small and dirty houses. "In what other manner," he asked, "can Nature point out to us that if we increase too fast for the means of subsistence so as to render it necessary for a considerable part of society to live in this miserable manner, we have offended against one of her laws?"†

While the movement of our population is governed by the Malthusian Law, it may be again insisted that the problem is not merely one of production. If all the food that India produces were equally distributed, every one would have enough, and probably a small surplus would be left over. India makes annually 500 crore yards of cloth, and consumes annually about 600 crore yards, including imports of about 100 crore yards. If this cloth were equally distributed, the average villager would be better clothed than he is—he possesses little more than the rags he stands up in. Given the amount of wealth produced, the existing system of distribution, the number of the inhabitants, and their habits and customs relating to marriage, it would have been surprising if the Indian population had increased as rapidly as that of most European countries between 1870 and 1910.

It has been estimated that possibly a fourth of the population of the United States is underfed in a normal year.⁸ The American standard of feeding is probably different from our own. Considerably more than half the population of our villages is underfed according to Indian standards, and it is not unlikely that

* Essay p. 108 (Bettany's Edition published in 1880).

† Essay, p. 442.

⁸ *Problems of Population*, edited by Pitt-Rivers, p. 334.

the proportion reaches about 75 per cent in many parts of India at the present time. A recent investigation, of an official nature, has shown that in the Punjab, Assam, Madras, the United Provinces and Bihar and Orissa only one-half of the agricultural population is in a position physically to withstand the onslaught of disease.⁹ The percentages of those 'poorly nourished' and 'very badly nourished' in the major provinces are estimated as follows:

			'Poorly nourished.' Per cent of total.	'Very badly nourished.' Per cent of total.
Punjab	..	..	38	20
United Provinces	..	..	39	21
Central Provinces	..	..	50	18
Bihar and Orissa	..	..	40	18
Bengal	..	..	47	31
Madras	..	..	33	18

The 'very badly nourished,' we are told, may economically be said to the already dead.

India is overpopulated in the relative sense. There is no doubt about that.

But our relative overpopulation is not of the conjunctural kind. Neither can we speak of fluctuating over- and under-population in India in the whole period 1872—1931. There has been relative overpopulation throughout the past 60 years, as shown by the irregular rate of increase, due to the strong reaction of the population to famine and disease.

SYMPTOMS OF OVERPOPULATION

In an agricultural country famine may be regarded as a worsening of conjuncture. But the connection between famines and overpopulation is not so intimate as Malthus thought. There was heavy famine mortality in 1876—78. It might be said that this famine mortality was an indication of extreme pressure on the

⁹ The report on this interesting investigation has not been published. A summary appeared in *The Civil and Military Gazette of Lahore*, dated May 25, 1933.

land and therefore a symptom of overpopulation. But even if a square mile of cultivated area supports only 50 persons, provided food cannot be imported from outside, a widespread failure of the rains (in the absence of canals and other artificial means of irrigation) must cause starvation and death. If density is light, fewer people die—that is all. Famine mortality is not always a reliable symptom of overpopulation, for under certain conditions famine mortality may occur in an under-populated country, and under other conditions (as in India at present), there may be no direct famine mortality in spite of overpopulation.

A fall in the standard of living of large masses of the population is the inevitable consequence of a rapid increase of numbers when the economic resources of a country fail to expand correspondingly.

A fall in the standard of living weakens the disease-resisting power of the people. The reaction of the population to disease is suggested by Indian experience as a reliable test of overpopulation.

As we have seen, the masses in India are peculiarly susceptible to the attacks of epidemics. In this respect there has been no change for the better during the past 60 years. Epidemics are some of the most powerful "correctives of the redundancy of mankind," and their prevalence in India shows that the country is overpopulated. Since epidemics (aided or unaided by famine) have played an important rôle in determining the growth of numbers in India since 1872, it may be concluded that overpopulation in India is of an enduring kind. One might even speak of permanent overpopulation in India. For unless there is a radical change of economic system and in the economic conditions in this country, no large change in the reaction of the masses to disease can be expected.

The Indian Census Commissioner for 1921 did not admit that there was a connection between the prevalence of disease in India and the economic circumstances of the people. The annual fluctuations of the birth and death rate in his view were "probably much more dependent on the intensity of the onslaught of the principal diseases, due to conditions of climate and environment,

than on any supposed variation in the resisting power to them of the people owing to economic circumstances."¹⁰

It would be difficult to establish a connection between the increase in the death rate in any year and the economic conditions of that or the preceding year. The influenza epidemic (1918-19) indeed came at a time of widespread crop failures, but the two preceding years were years of bumper crops. No epidemic is directly caused by crop failures or poverty, but when an epidemic does come, the economic circumstances of the people have an important share in determining their reaction to it.

Mr. G. F. Hardy, who wrote the actuarial report on the Census of 1881, was struck by the large proportion of children and the small number of old persons in India. That pointed to a high death rate and a low rate of increase per annum—"about one-fourth less than the English rate of increase." "Hence a merely general view of the age tables demonstrates the fact," said Mr. Hardy, "that the death rate in India is considerably higher than in England and consequently, that the average duration of life must be shorter, conclusions which are confirmed by the more detailed examination to which the materials available have been subjected."*

He did not consider the higher death rate to be "entirely the effect of periodical visitations of famine and epidemics" as in years which were entirely free from these scourges the death rate still remained very much higher than the average death rate in England. He thought that a large part of the additional mortality was the effect of climate and the general sanitary conditions of the country. "On the other hand, however," he said, "it is not at all improbable that it is partly caused by deficiency of stamina in the native races as compared with the English. Not only are vast numbers of the poorer classes unfed, but they are descended from generations subject to the same disadvantage, and thus inherit constitutions less robust from the first than those of European races, and at the same time having, unfortunately, to contend against greater odds in the struggle for existence."†

¹⁰ *Report*, Vol. I, p. 55.

* *Census of 1881, Report*, p. 172.

† *Ibid.*

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The population problem is a grave one. But it is ignored both by the Government and public leaders.

In a country where considerably more than half the total village population is underfed, the main burden of provincial administration rests on the cultivator.

No attempt has been made by Government to reduce the pressure on the soil by diverting surplus population in the villages to towns. The Famine Commission of 1880, which examined the experiences of the devastating famine of 1876—78, drew pointed attention to the necessity of developing non-agricultural sources of livelihood. But it was not until 1924 that India adopted discriminating protection as her tariff policy. Till the outbreak of the Great War we levied a 5 per cent duty on imports for revenue purposes, and the Indian cotton-mill industry paid an excise duty till the year 1926.

The Government is taking a keen interest in the development of cottage industries, and prominent public men are associated with the rural reconstruction movement. But *charḥa*, *khaddar*, and *gur*-making will not solve the population problem. It is ridiculous to think that cottage industries can be revived when machine-competition is growing in intensity, or that any change can be induced in the reaction of the village people to disease by adding "a few pies" to their daily income.

THE PROBLEM OF DISTRIBUTION

Much of the present economic distress in India and other countries is due to mal-distribution of wealth.

The fall of prices, which has produced such ruinous consequences for India and other agricultural countries, is attributed to overproduction. But in view of the large unsatisfied demand in the world for almost everything, this overproduction must be understood in relation to effective demand. Production has not exceeded the limits of human consumption; probably it never will.

When production exceeds effective demand and prices fall, the balance between production and consumption may be restored,

and a rise of prices brought about, in one of two ways: (a) stimulating demand by increasing the purchasing power of the masses or (b) reducing supply.

Restriction of production is an old and tried method. There is no doubt whatever that if production is sufficiently restricted, prices must rise.

But restriction of production implies that producing capacity is not fully utilized. It is a retrograde step. Science and invention have created the means of lessening human toil and increasing human comfort. A fall of prices enables the poorer classes to share in the gains of progress, and is, therefore, a matter for rejoicing. When an attempt is made to raise prices by the restriction of production, undeserved injury is inflicted on the consumer.

A way of escape from our present difficulties, which has been suggested, is return to the simple life, a state of things in which wants are few, and each family is self-sufficient, producing largely what it consumes. At the present time even village economy is not self-sufficient. A return to the simple life of pre-historic times is not inconceivable, but for that we have first to isolate ourselves from the rest of the world.

It deserves to be emphasized that even if the isolation of India from the rest of the world were possible, the simple life would be a life of greater poverty and hardship for the masses than at present.

The right way of restoring the balance between production and consumption is not by capitalist sabotage, or reversion to hand-power, which is an attempt to sabotage civilisation, but a better distribution of wealth.

This is generally recognised. The world has not turned socialist but even in countries which may be described as strongholds of capitalism, it is beginning to be felt that a crisis such as the present cannot be overcome without stimulating mass consumption.

Take, for example, the American plan of recovery. The great national effort to stimulate consumption was an essential part of the plan. President Roosevelt is not a socialist, but on signing the National Industrial Recovery Act he said:

"The law that I have just signed was passed to put people back to work—to let them buy more of the products of the farms and factories and start our business at a living rate again. It seems to me to be equally plain that no business which depends for existence on paying less than living wages to its workers has any right to continue in this country. . . . and by living wages I mean more than a bare subsistence level—I mean the wages of decent living." And "decent living," said the President, "widely spread among our 125,000,000 people, means the opening up to industry of the richest market which the world has known."

Decent living, widely spread among our 353,000,000 people, will mean the creation of a market for the products of our large-scale industry far bigger than the United States.

There is a growing consciousness throughout the world of the grave inequality in the distribution of wealth under the existing system, and of how this inequality restricts the purchasing power of the masses. Even from the point of view of the capitalist it is desirable to bring about a more equitable distribution of wealth. For, it is easy to produce more and more goods, but it is difficult to sell them when the masses have little purchasing power. In this connection the reader's attention may be drawn to an interesting article in the *London Spectator* of December 21, 1934, by Mr. Thomas Burns. The author is a young capitalist who fails to understand the policy of his elders. He blames them for having landed us "in this grand economic muddle we call Modern Capitalism." There are moments when he despairs of "the idiocy" of his elders. "Modern capitalism," he says, "never fails to produce enough goods: it continually fails to produce enough customers." The young capitalist bewails the loss of England's old customers. "We must at all costs find new customers. We shall find—I am finding—some useful ones among our Imperial connection." But in her own population England has a "far vaster reservoir of customers"—if their purchasing power can be increased. Referring to the 50 million inhabitants of the British Isles the young capitalist says: "The vast majority of them are still only to be described as poor: they have not

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sufficient purchasing power to satisfy their reasonable needs: their poverty, I, the young capitalist, regard as at once my greatest opportunity and my greatest menace. If their poverty has not been changed in the next few years into a reasonable measure of wealth, then capitalism will be swept away into the limbo of futilities, and rightly so."

If the vast majority of the 50 million inhabitants of Britain are still only to be considered 'poor,' is there any word in the English language which adequately describes the economic condition of the vast majority of our 353 millions?

DISTRIBUTION OF WEALTH IN INDIA

It is sometimes thought that wealth is more equitably distributed in an agricultural than in an industrial country. But the distribution of wealth in India is inequitable enough.

The Punjab is an agricultural Province and the chief source of our wealth is land. How is land distributed among owners in this Province?

The following figures have been taken from a publication of the Board of Economic Inquiry, Punjab, entitled *The Size and Distribution of Agricultural Holdings in the Punjab* (1925). The author is Mr. H. Calvert, I.C.S., who was then Registrar of Co-operative Societies:

	Owners	No.	Per cent of	Land owned,	Per cent of
	(1000)	total owners	acres (1000)	total land	
I	625	17.9	313	1	
II	1,428	40.4	3,200	11	
III	919	26.2	7,753	26.6	
IV	313	11.8	10,300	35.6	
V	121	3.7	7,452	25.7	
<hr/>					
TOTAL ..	3,406	100.0	28,818	99.9	

The estimates are not exact, but they indicate sufficiently clearly the manner in which land is distributed among owners in

the Punjab. Take the first two classes together. Roughly, over 58 per cent of the owners own only 12 per cent of the cultivated area, while less than 4 per cent of the biggest owners (class V) own a little more than one-fourth of the cultivated area. If we take the last two classes together, it is found that more than 61 per cent of the cultivated area is owned by 15.5 per cent of the total number of owners.

The smallest owners, 17.9 per cent of the total, possess less than 1 acre of cultivated land and class II, 40.4 per cent of the total owners, possess from 1 to less than 5 acres. Thus more than half of the owners possess less than 5 acres each.

The smaller owners take extra land for cultivation from bigger owners. From this point of view there is not much to choose between tenant cultivators and the smallest owners.

Landlordism as a factor affecting the distribution of wealth is of considerable importance in the Punjab. According to Census figures (1931), taking male earners alone whose principal occupation is agriculture, there are in the Punjab about 2 lakhs of non-cultivating proprietors who live on rent paid in money or kind, as compared with 17 lakhs of cultivating owners, 11 lakhs of tenant cultivators and 5 lakhs of agricultural labourers. Those who live on rent form only 5.4 per cent of the total sub-order (a), *Cultivation* (35.4 lakhs), but the actual distribution of land among owners shows very great inequalities. It limits the purchasing power of smaller owners and of tenant cultivators.

Landlordism is of much greater importance in the United Provinces and Bengal.

Mahatma Gandhi's idea is to bring about a better distribution of wealth in our villages by making the land-lord trustee of the welfare of tenants. Mahatma Gandhi's mistake lies in interpreting human nature in his own terms. The only real solution of the problem of distribution consists in a change of system which makes the State the universal trustee.

In socialist planning—economic as well as cultural—lie our hopes of progress. Cultural planning will educate the masses and lead them to take a rational view of life, and particularly marriage.

Under existing conditions we spend about 45 crores on the Army and 12 crores on the police, but there is no money for mass education. Poor, illiterate and ignorant as the masses are, their passions are easily inflamed by communal leaders, and from time to time India celebrates orgies of communal rioting, murder, and arson. Communal leaders are no common men. They enjoy rank and titles, and are honoured by Government. Mass education, combined with a rational view of life, will lead to the limitation of births, and incidentally solve the communal problem. A State-planned, State-directed and State-controlled system of production may in less than a generation build up a sound industrial system on modern lines, withdraw surplus labour from the villages, thus reducing the growing pressure on the land, and modernise agricultural methods. A greater production of wealth, and a better distribution of it are the real means of saving the people from epidemics.

A rise in the standard of living of the masses will create in them a desire for a higher and richer life. No one wants numbers to grow recklessly in this country. An enlightened, well-fed, well-clothed and properly housed population of 150 millions is better than a crowd of 353 millions, most of whom do not know the meaning of education and culture, are economically speaking more dead than alive, and exist only as *balidan* for epidemics.

CHAPTER IV

AGRICULTURAL PRODUCTION AND RELATED PROBLEMS

The following table shows the average yield of the principal crops in 1910-11 to 1914-15, 1928-29 to 1932-33 and actual yield in 1932-33 and 1936-37.

YIELD OF PRINCIPAL CROPS

		Average 1910-11 to 1914-15	Average 1928-29 to 1932-33	1932-33	1936-37
Rice, million tons	..	28·4	31·9	31·0	33·2
Wheat, million tons	..	9·7	9·4	9·4	9·8
Sugar (raw), million tons	..	2·4	3·5	4·7	6·7
Tea, million lbs.	..	290·1	411·2	433·7	395·2
Cotton, million bales *	..	4·4	5·0	4·5	6·3
Jute, million bales	..	9·1	8·8	7·1	9·6
Linseed, 1,000 tons	..	508	380	405	418
Rape and Mustard, 1,000 tons	..	1,226	1,014	1,052	976
Sesamum, 1,000 tons	..	471	500	547	484
Castor seed, 1,000 tons	..	114†	125	149	128
Groundnut, 1,000 tons	..	695	2,624	2,934	2,808
Indigo, 1,000 cwts.	..	37	13	11	(a)
Coffee, million lbs.	..	23·6†	33·5	33·7‡	41·2**
Rubber, million lbs.	..	13·0†	25·1	6·0	6·0

The noteworthy changes as compared with the pre-war average are a considerable increase in the production of sugar-cane, tea, and groundnuts.

(a) Not available.

* A bale contains 400 lbs.

† Average 1920-21 to 1924-25.

‡ For 1931-32.

The yields of other crops in 1932-33 were: Barley 2·4 million tons; jowar 6·5 million tons; bajra 2·6 million tons; maize 2·1 million tons; gram 3·5 million tons and tobacco 608,000 tons.

** For the year 1935-36.

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Both the area and the yield of sugar-cane have been steadily expanding since 1929-30. Jute has suffered a set-back. The area under this crop in 1930-31 was about 3·5 million acres and yield 11·2 million bales; the figures for 1936-37 are 2·9 million acres and 9·6 million bales. Production of oil-seeds has increased during the past five years. Indigo has steadily lost ground, but it is an old story. The production of rubber fell heavily from 20 million lbs. in 1931-32 to a little over 6 million lbs. in 1932-33. Since then production has rapidly expanded.

DISTRIBUTION OF CROPS

Rice.—The most important centres of production are: Bengal (10·7 million tons); Madras (about 5 million tons); Burma (about 5 million tons); and Bihar and Orissa (about 4 million tons). The exports of rice amount to less than 5 per cent of total production.

Wheat.—Wheat is most largely grown in the Punjab and the United Provinces (about 3 million tons each). The exports are negligible at present. The last year in which India exported a considerable quantity of wheat (over 1 million tons, valued at 17 crores of rupees) was 1924-25.

Sugar-cane.—In 1936-37 the United Provinces produced 3·8 million tons of gur (raw sugar), Bengal 6½ lakh tons, Punjab about 4 lakh tons and Bihar about 7 lakh tons.

Tea.—Tea is grown most largely in Assam and Bengal. About 90 per cent of the Indian production is exported.

Cotton.—The most important centres of cotton production are: †Bombay (633,000 lbs.); Central Provinces and Berar (810,000 lbs.); Punjab (1,455,000 lbs.); and Madras (497,000 lbs.). In 1936-37 68 per cent of the total crop was exported, as compared with 61 per cent in the post-war period (1919-20 to 1923-24).

Jute.—Jute is chiefly grown in Bengal, and to a very small extent in Assam, Bihar and Orissa.

Oilseeds.—Linseed, rape and mustard, sesamum and castor-seed are grown in most of the major provinces. Groundnuts are most largely grown in Madras. The proportion of exports to production is shown below:

† Excluding Sind.

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		Post-war average	1936-37
Linseed	59	71
Rape and mustard	19	4
Sesamum	6	3
Groundnuts	19	26

Coffee.—Coffee is grown in Mysore, Madras and Coorg.

Rubber.—Rubber is chiefly produced in Burma and Travancore.

Indigo.—Madras has the largest area under indigo, 30,000 acres, and next, Punjab, 9,000 acres (1936-37). The total area under indigo in India in 1936-37 was 43,000 acres (770,000 acres in 1917-18).

POPULATION AND FOOD SUPPLY

Is the outturn of food in India in excess of the needs of the population? The question is suggested by the heavy fall in the price of food-grains. If there is over-production of wheat, rice and other food-grains it may be desirable to restrict production, in order to adjust supply to demand.

The Prices Enquiry Committee of 1910 examined the question of food supply in relation to the growth of numbers between 1890-91 and 1911-12. The Committee drew attention to the substitution of non-food-crops for food-crops in certain parts of India, as the result of which there was 'a diminution in the food supply of the country and a consequent rise of prices' (para 173). The general conclusion of the Committee was that during this period the requirements for food-grains for internal consumption increased in a larger proportion than the total production of food-grains (para 146). This conclusion was criticised by the Government of India in a note pre-fixed to the Report of the Committee. The Government referred to the untrustworthy nature of the estimates of area and yield of crops and their incompleteness, and maintained that the area under food-crops had increased in almost exact correspondence with the growth of population which, in view of the improvement in the means of transportation and the extension of irrigation, implied 'the production on the average of a relatively larger and more efficient food supply' (*Prices Report*, p. viii).

The rise of prices after 1905 was not due to comparative shortage of food but causes of a more general nature connected with the Indian monetary system.

What is the situation at present?

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The following statement shows the area under rice and wheat and the total area under food grains in British India in 1911-12 and the following years:

<i>Area under Food-grains in million acres</i>				
		All food grains	Rice	Wheat
1911-12	..	195.1	76.6	25.0
1912-13	..	201.4	78.8	23.9
1913-14	..	191.6	76.9	22.7
1914-15	..	204.5	77.7	25.5
1915-16	..	203.7	78.7	25.5
1916-17	..	208.8	81.0	25.0
1917-18	..	207.4	80.7	26.4
1918-19	..	177.8	77.6	19.1
1919-20	..	199.7	78.7	23.5
1920-21	..	186.9	78.1	20.4
1921-22	..	204.8	79.7	22.4
1922-23	..	205.0	80.6	24.4
1923-24	..	197.0	77.2	24.3
1924-25	..	200.3	79.3	24.8
1925-26	..	196.1	80.2	24.0
1926-27	..	197.2	78.5	24.2
1927-28	..	196.7	76.6	24.6
1928-29	..	200.3	81.1	24.9
1929-30	..	200.1	79.4	24.7
1930-31	..	202.7	80.6	24.8
1931-32	..	205.0	81.3	25.3
1932-33	..	201.5	80.0	25.0
1933-34	..	206.2	80.4	27.6
1934-35	..	200.6	79.5	25.7
1935-36	..	200.3	79.9	25.1

The averages for the five years ending 1915-16 are: rice 77.7 million acres, wheat 24.2 million acres and all food grains 199.3 million acres. The figures for recent years do not show any large increase over these averages.

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The population of British India increased from 243·8 millions in 1911 to 271·5 millions in 1931 or by 11 per cent. It is evident that population has been increasing more rapidly than the area under food-grains in British India.

But we must not conclude in haste that there must be an actual shortage of food at the present time.

The production of food in British India in 1932-33 may be thus estimated:

			Area Million acres.	Food Million tons.
Rice	..	..	78·6	29·8
Wheat	..	..	24·8	7·6
Barley	..	..	6·3	2·4
Jowar	..	..	21·4	4·7
Bajra	..	..	13·6	2·2
Maize	..	..	6·3	2·1
Gram	..	..	13·9	3·4
Ragi for 1930-31	..	..	4·0	1·3 at 8·6 mds. per acre ¹
Other food grains and				
pulses, 1930-31	..	..	30·0	17·7 at 16 mds. per acre ¹
TOTAL	..	..		<u>71·2</u> ✓

The monsoon of 1932 was fairly normal and gave, on the whole, well-distributed rains all over the country. The yields in 1932-33 may be regarded as 'normal'.

The statement given below shows estimated consumption:

Outturn of food	..	..	71·2 million tons
Population	271·5 millions

¹ Estimate of yield per maund according to the *Prices Report*, 1914.

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Million tons

Food	54.3 assuming that one ton of food will feed 5 persons for a year.
Seed	..	..	5.0 at 7 per cent of outturn.
Cattle food	..	..	3.6 at 5 per cent of outturn.
Wastage	..	..	3.6 at 5 per cent of outturn.
Total consumption	..	..	66.5 million tons.
Estimated surplus	..	..	4.7 million tons.

These figures are conjectural, but it is probably true that the surplus of food-grains at the present time is less than 9.53 million tons, estimated by the Famine Commission of 1898.

Allowance must also be made for an export of about 2 million tons of food at present.

It would seem that it is incorrect to speak of over-abundance of food in India. The restriction of food cultivation by the substitution of non-food crops for food crops may dangerously reduce such surplus of food as exists, and inflict hardship on the consumer in a year of unseasonable rainfall.

Cultivation of food should be made remunerative by making it possible for the cultivator to reduce his costs, not by restricting supply.

The extension of canal irrigation in Sindh will make the reserve of food larger than it is at present and is therefore not unwelcome.

Soil-Deterioration

Is the fertility of the soils of India declining?

In answer to their enquiry the Agricultural Commission were informed that in Bengal, Bombay and Burma there was no evidence of any decline in the yield of staple crops, while in Madras, the United Provinces and the Punjab the tendency was towards a slight increase in return.

According to the Agricultural Adviser to the Government of India, Indian soils reached their state of maximum impoverishment many years ago. The Commission took the view that a stabilised condition had been reached, natural gains balancing the plant food materials removed by crops and other losses: "A balance has

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been established, and no further deterioration is likely to take place under existing conditions of cultivation.”*

Dr. Voelcker, who wrote the first Report on Indian agriculture (1892), took a different view.†

Uneconomic Holdings!

In his evidence before the Agricultural Commission Mr. Keatinge said that “the agricultural holdings of the Bombay Presidency have to a large extent been reduced to a condition in which their effective cultivation is impossible.”⁶ Conditions in other parts of India are not very different.

It is stated in the Report of the Agricultural Commission that in the Punjab “the area of cultivated land held by each owner is

* Report, p. 76.

† “It must be accepted as an axiom in agriculture” he says, “that what is taken off the land in crops must in some way be put back into the soil, or else the soil will suffer exhaustion. It is an equally accepted fact that the production of heavier crops means that more manure must be applied to the land. A country which exports both crops and manure must be declining in fertility. Now what is the state of things as regards India? On the one hand there is a large export of oil-seeds, cotton and other products, besides an increasing one of wheat, all of which remove a considerable amount of the soil-constituents. What is returned in their place? Only the straw or the stalks and leaves; and it is not even correct to say that these are returned, for, after all, it is only a portion, and frequently a very small portion, that does find its way back to the soil. Part is necessarily used up in the bodies of the cattle, part is wasted by imperfect conserving and storing of manure, part must unavoidably be lost, however great the care that may be taken; thus it comes about that it is only a fraction that contributes finally to making up the loss the soil has sustained.

“Were, on the contrary, all grains to be consumed by the people, and all nightsoil to be used in agriculture; where all refuse of oil-seeds (after pressing out the oil) to be utilised for manure; were all straw to be consumed by cattle, and the droppings, solid and liquid together, to be carefully preserved; lastly, were all stocks and leaves to be buried again in the land; then the balance might be more nearly preserved. But as things are, the export of oil-seeds, grain, etc. (that of bones I will discuss later), simply means so much of the soil-constituents carried off, for which no adequate recompense is made.

“The consequence must be that the soil becomes gradually poorer, though the effect may not as yet be visible to the eye; for even if the soil be still producing the same crops, the potential fertility (by which I mean the reserve of constituents for the production of future crops) must be suffering loss, and the capabilities of the soil must be less than under a system of equal giving and taking.” *Report on the Improvement of Indian Agriculture*, by Dr. Voelcker, pp. 39-40.

⁶ *Ibid.*, p. 132.

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increasing on the whole.”⁷ This is incorrect. Net area actually sown in the Punjab in 1922-23 and 1931-32 is shown below:

			Net-work actually sown 1,000 acres.
1922-23	..	..	26,961
1931-32	..	..	27,550

The increase in area was 2 per cent; as against this the population of the Punjab (British Territory) increased by 14·6 per cent between 1921 and 1931, and the number of cultivating owners and tenant cultivators (taken together—separate figures being not available for 1921), increased by 24·7 per cent. There is no doubt that the area of cultivated land held by each owner in the Punjab to-day is less than in 1921.

In the Punjab 17·9 per cent of the owner's holdings were found to be under one acre. The proportion of holdings under one acre is even higher in some other parts of the country.⁸

The sub-division of land takes place according to our laws of inheritance; it cannot be checked without interfering with these laws.

The creation by legislation of impartible holdings did not meet with the Agricultural Commission's approval. One of the effects of such legislation must be “to create a landless proletariat, which is always a danger,” as the Madras Board of Revenue observed.

The sub-division of owners' or right-holders' holdings would give rise to an equal sub-division of cultivation, if all owners were cultivators. But all owners are not cultivators, and many cultivators do not own land. It is actually found that sub-division is greater amongst cultivators. In the Punjab, as an enquiry showed, while 17·9 per cent of owners owned less than one acre, 22·5 per cent of cultivators cultivated one acre or less. The sub-division amongst cultivators, as the Agricultural Commission said, “is aggravated by the lack of alternative means of livelihood which drives multitudes to grow food for bare subsistence.”⁹

⁷ *Ibid.*, p. 131.

⁸ *Ibid.*, p. 133.

⁹ *Ibid.*, p. 133.

Fragmentation is also of two kinds. According to the laws and customs governing inheritance each heir is entitled to a proportionate share of each field. This leads to fragmentation of the land of permanent right-holders. Fragmentation of cultivation is much worse; each tenant, unable to rent all land from a single owner, rents small pieces from different owners. In Pimpla Soudager (Bombay Deccan) Dr. Mann found that 62 per cent of the cultivators' plots were below one acre. In Behrampur (Hoshiarpur, Punjab), Mr. Ram Lal Bhalla found that 34·5 per cent of the cultivators had over 25 fragments each.

Consolidation of holdings is being tried as a remedy in the Punjab and other provinces. But unless alternative means of livelihood are discovered, the position of cultivators must continue to deteriorate from decade to decade.

The State in Relation to Agriculture

The Lancashire cotton trade "has frequently exercised considerable influence in shaping the agricultural policy of the Government of India."¹ In 1869 the Manchester Cotton Supply Association suggested the establishment of a separate Department of Agriculture in each Province.

A beginning was made with the opening of a central department—the Department of Revenue, Agriculture and Commerce of the Government of India. This Department functioned from 1871 to 1879.

The Report of the Famine Commission of 1880 eventually led to the establishment of provincial departments of Agriculture, their duties being agricultural enquiry, agricultural improvement and famine relief.

In 1889 Dr. J. A. Voelcker came to India to advise upon the application of agricultural chemistry to Indian conditions. His report may still be read with interest and profit. There followed some appointments to the scientific staff of the Imperial Department of Agriculture in 1892.

¹ Report of the Agricultural Commission, 1923, p. 15.

The recommendations of the Famine Commission of 1901 led to the establishment of co-operative credit societies and a great expansion of the Imperial and Provincial Departments of Agriculture after 1905.

An Imperial Research Institute was founded at Pusa, but the Institute failed to become "a focus of agricultural activity for all India." The Agricultural Commission found that "the thread of connection between Pusa and the Provinces was becoming more and more attenuated."²

Other institutes and organisations controlled by the Government are the Institute of Animal Husbandry and Dairying at Bangalore, cattle-breeding and dairy farms at Karnal, Bangalore and Wellington, the creamery at Anand, the Sugarcane Breeding Station at Coimbatore, and the Imperial Institute of Veterinary Research at Muktesar.

The Report of the Indian Cotton Committee of 1917-18 led to the formation of the Indian Central Cotton Committee in 1921 with a legal status. The Committee is concerned with the improvement of cotton marketing and the prevention of mal-practices. At the same time it carries on agricultural and technological research, serves as a bureau of information, and advises upon the development of cotton growing in the different provinces. The Institute of Plant Industry, Indore, was established in 1924.

The Government of India decided in 1905 to spend 20 lakhs (increased to 24 lakhs later) annually for the development of agricultural research, experiment, demonstration and education in the provinces. Agricultural colleges exist in all provinces. The total provincial expenditure on agriculture now amounts to over 2 crores annually.

Following the recommendations of the Agricultural Commission, the Imperial Council of Agricultural Research has been established. In the budget of the Central Government for 1929-30 a provision of 16.4 lakhs was made for agricultural research, of

² *Ibid.*, p. 45.

which 15 lakhs represented the initial grant to a total Endowment Fund of 25 lakhs (50 lakhs suggested by the Agricultural Commission). The Endowment Fund is supplemented by annual grants from central revenues. The work of the Imperial Council of Agricultural Research is to promote and co-ordinate research throughout India and to link it with research in other parts of the world.

Indian agriculture needs a fundamental reorganisation. Our experience during the world crisis suggests that the problem of Indian agriculture is too difficult to be solved by agricultural research or improvement. No real progress is possible without radical changes in the system of landholding and in methods of cultivation. Further, Indian agriculture cannot be modernised unless means are found to divert surplus labour in the villages to manufacturing industries.

Animal Husbandry

The following table, borrowed from the *Report of the Agricultural Commission*, shows the number of bullocks, cultivated area and the number of cultivators in different provinces:

Province.	Per 100 acres of net sown area.		Average.	
	Bullocks. No.	Cultivators (Male workers). No.	Area cultivated per yoke. Acres.	Area of holding. Acres.
Bombay (in- cluding Sind)	10	8.1	20.0	12.4
Burma ..	11	11.5	17.9	8.7
C. P. & Berar	15	7.6	13.3	13.2
Madras ..	15	17.3	13.0	5.8
Punjab ..	16	11.2	12.8	9.0
Bihar & Orissa	27	26.8	7.4	3.7
Assam ..	27	27.5	7.3	3.6
U.P. ..	29	29.1	6.9	3.4
Bengal ..	36	35.2	5.6	2.8

The table shows that the number of bullocks varies directly with the number of cultivators and inversely with the size of the holding. Bengal has the largest number of bullocks. The size of the holding is smallest in Bengal, and Bengal has also the largest number of cultivators per 100 acres. It may be added that the bullocks of Bengal are easily the worst in India.

In Europe, the Commission said, Holland possesses the largest number of cattle in relation to the size of the country, but as compared with British India's 67 cattle per 100 acres of net area sown, Holland has only 38 per 100 acres of cultivated land. Egypt has only 25. But it has to be remembered that horses in Holland and donkeys in Egypt are largely used in agriculture. "Full grown Dutch cattle may, on the average, weigh twice as much as Indian, and Dutch cows may give anything from five to ten times as much milk as Indian cows."³

The Agricultural Commission thought that "India is attempting to maintain an excessive number of cattle."⁴ A vicious circle exists here. In order to secure useful bullocks cultivators breed more and more cattle, but, as numbers increase, the quality deteriorates.

How may quality be improved? The Agricultural Commission suggested two ways: (1) the number of bullocks required for cultivation must be reduced through checking the sub-division and fragmentation of holdings, increasing the efficiency of the cultivator's tillage implements, and by the adoption of measures aiming at an increase in the strength of the bullocks themselves; and (2) dry cows and cows in calf should receive better treatment than they do at present.

"India must endeavour to effect a reduction in the numbers and an increase in the efficiency of its plough cattle."⁵ But the demand for plough bullocks must grow with the growing sub-division of land and increase in the number of cultivators. When more plough bullocks are demanded, more and more cattle must be bred.

³ *Ibid.*, p. 188.

⁴ *Ibid.*, p. 191.

⁵ *Ibid.*, p. 196.

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The Commission recommended that efforts should be concentrated on growing more grass in the existing grazing areas, since no large additions to them are possible.

As regards milk supply, the Commission recommended that the breeder of dairy cattle should aim at a cow producing 8,000 lbs. of milk annually (about 11 seers daily). Municipal authorities may provide cow-sheds outside municipal limits and assist in promoting schemes for large scale milk-production and in establishing depôts for the collection, pasteurising and cooling of milk.

The first general quinquennial census of live-stock was taken in 1919-20, the second in 1924-25 and the third in 1929-30. The Agricultural Commission used the figures of the second census. The figures for live-stock for 1929-30 are compared below with the population of the last census (1931), and the area of 1929-30:

		Bullocks in 1000.	Net area sown in 1000 acres.	Male cultivators (principal occupa- tion, in thousands).
Assam	..	1,684	5,578	1,681
Bengal	..	8,389	23,370	8,394
Bihar & Orissa	..	7,021	24,958	8,310
Bombay	..	3,410	32,924	3,451
Burma (1931-32)		1,951	17,775	2,598
C. P. & Berar (1931-32)	..	3,984	25,015	3,204
Madras	..	6,001	34,372	7,775
Punjab	..	3,939	26,637	3,542
U. P.	..	10,071	34,346	11,715

PER 100 ACRES OF NET SOWN AREA

			Bullocks No.	Male cultivators No.
Bombay	..	..	10·3	10·5
Burma ..	..	..	11·0	14·6
Punjab	..	..	14·8	13·3
C. P. & Burma	..	..	15·9	12·8
Madras	17·4	22·6
Bihar & Orissa	24·1	33·3
U. P.	29·3	34·1
Assam	30·2	30·1
Bengal	35·9	35·9

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A comparison of these figures with those of the Agricultural Commission is interesting. In each Province the number of cultivators per 100 acres of net sown area has increased. As regards bullocks, the number decreased in the Punjab and Bihar and Orissa, remained unchanged in Burma and Bengal, and increased in the other Provinces.

The following table will be found useful for comparative purposes:—

INTERNATIONAL STATISTICS OF LIVE-STOCK. ABOUT 1925.

Population given in brackets in millions.	Per 1000 of the population.				
	Horses.	Cattle.	Sheep.	Pigs.	Goats.
United Kingdom (45'4) ..	3	16	48	8	..
Germany (62'6) ..	6	27	8	26	6
France (40'7) ..	7	35	26	14	3
Italy (40'1) ..	3	16	29	6	7
Holland (7'5) ..	5	27	9	20	4
European Russia (116'0)	15	33	47	13	1
Switzerland (3'96) ..	3	36	6	16	8
U. S. A. (117'1) ..	14	53	34	48	3
Denmark (3'5) ..	15	79	8	73	1
Canada (9'4) ..	38	99	29	26	..
Brazil (33'0) ..	16	104	24	49	15
Australia (6'1) ..	38	219	1,313	15	4
Argentina (10'3) ..	90	360	382	14	47
India (271'5) ..	0'6	56	9	..	13

(Sources: For population figures see *International Statistical Year-book of the League of Nations*, 1927, and for live-stock, *Viehstatistik in Handwoerterbuch der Staatswissenschaften*, Vol. VIII, p. 695. For India the live-stock figures relate to 1929-30 and population is of the census of 1931).

Per 100 of the population India has fewer horses than other countries. Denmark (not Holland) in Europe has the largest

number of cattle relatively to the population. Denmark, Canada, Brazil, Australia and Argentine have more cattle per 100 of the population than India. The figure for the United States, 53, is only slightly lower than that for India (56). If, on an average, American cattle weigh twice as much as Indian, and American cows (like the fearful Dutch cows) give five to ten times as much milk as Indian cows, the United States is really much better off than India, though possessing a smaller number of cattle.

The actual number of cattle in certain countries is given below:

Cattle in 1000, about 1925.

Denmark	..	..	..	2,756
Canada	..	..	..	9,307
Brazil	..	..	..	34,271
Australia	..	..	..	13,358
Argentine	..	..	..	37,065
U. S. A.	..	..	..	62,150

Between 1850 and 1925 the number of live-stock in over-seas countries, like the United States and Australia, increased with lightning speed (*blitzartig*). The United States had, in 1850, 4.3 million horses, 17.8 million cattle, 21.8 million sheep, and 30.4 million pigs. The increase in 1925 was about 4 times for horses, more than 3 times for cattle, and a little less than double for sheep and pigs.*

It is not necessary that the quality of cattle must deteriorate with increase in their number. But conditions in India are peculiar.

The present writer, during a stay of several months in Holland some years ago, did not have the good fortune to see a single Dutch cow in the towns he visited. It is not suggested that Dutch cows, of which the Agricultural Commission speak, are non-existent. But cows are not so generally visible in European towns as they are in our towns. What one sees in European towns is only their milk.

* *Handwoerterbuch der Staatswissenschaften*, Vol. VIII, p. 697.

FORESTS

The following statement shows the revenue expenditure and surplus of the Forest Department throughout British India:

	1913-14	1929-30	1933-34	1935-36
	Lakhs.	Lakhs.	Lakhs.	Lakhs.
Revenue ..	333	613	353	432
Expenditure ..	175	348	333	280
Surplus ..	158	265	20	152

The growth of the surplus between 1913-14 and 1929-30 will be noted. Roughly the forest revenue doubled in this period. The heavy fall in revenue in depression years was due to the fall in prices. In the year 1933-34 revenue and expenditure were about equal. The rise of prices in recent years is reflected in the increase of surplus in 1935-36.

The total area of forests, including Burma, is a little over 1 million sq. miles. The proportion of forests to the total area varies greatly in the case of different provinces: Burma (now separated from India) 65·6 per cent, Assam 38·6 per cent, Bengal 14 per cent and the Punjab 5·4 per cent. The total amount of timber and fuel produced in 1935-36, including Burma was about 400,000,000 cubic feet. The value of minor produce in the same year was estimated at Rs. 110 lakhs.

The following table shows forest revenue and expenditure in 1935-36 by Provinces:

FOREST REVENUE AND EXPENDITURE

	Revenue. Lakhs.	Expenditure. Lakhs.	Surplus or deficit. Lakhs.
Madras ..	45	39	6
Bombay ..	59	31	28
Bengal ..	20	15	5
U. P. ..	49	28	21
Punjab ..	19·5	20·2	0·7
Burma ..	144	59	85
Bihar & Orissa ..	7	7	..
C. P. ..	49	35	14
N.-W. F. P. ..	4	3	1
Assam ..	15	11	4

In the case of the Punjab, expenditure, Rs. 20,24,000 exceeded revenue Rs. 19,53,000 or there was a deficit of Rs. 71,000. Expenditure has been somewhat reduced, for in 1932-33 it amounted to Rs. 22 lakhs as against a revenue of 19.5 lakhs. In 1936-37 the deficit rose to over 4 lakhs, owing to the payment of over 3 lakhs made to Sir Daya Kishan Kaul on account of his share in the Jallo Resin Factory, which has now passed under exclusive Government control.

After seven successive years of deficits the Punjab Forest Department has shown a profit of Rs. 75,000 in 1937-38. The Jallo Resin Factory earned a profit of over a lakh. Another source of financial help was the rise in the price of fuel wood, believed to be due to the decreasing supply of fuel wood in the Province.

The work of the Forest Department is not only afforestation, but the protection of existing forests. Protection consists in preventing thefts of timber and unauthorised grazing; protection against fire through fire-watchers, protection from cattle and against injuries from natural causes, for example climatic conditions, landslips, river action, insects, foreign and other parasites. Nilgai, we learn, are a serious nuisance in Chhanga Manga.

The Punjab Forest Report for 1937-38 states that soil erosion and denudation of forest areas are increasing owing largely perhaps to the increased pressure of the population on land, particularly in the tracts along the foot of the hills.

✓ *Utility of Forests.*—A Forest Department is not useless because it spends more than it earns, though there is little justification for maintaining more staff than is required, or for paying excessive salaries to the staff.

The utility of forests both direct and indirect, to the country is enormous. The effect of forests on climate, humidity and rainfall is well-known. Forests tend to reduce floods, check avalanches, and add to the beauty of a country.

“The economic history of the whole of the Middle Ages” says the *Handwoerterbuch der Staatswissenschaften*, “is to a great extent the history of forests, and also at present the weal or woe of

country-people depends on the use made of forests."* Forests yield produce which forms the raw material of many manufacturing industries. There are furniture industries in every Province. Bamboo pulp may be used for paper-making. Protection was granted in India to paper made from bamboo pulp; the extent, however, to which bamboo pulp is actually used for this purpose is not known.

IRRIGATION AND WATER-LOGGING

In the year 1911-12 the net area sown with crops in British India amounted to 216 million acres, of which 40·7 million acres were irrigated (18·8 per cent of total). In the year 1929-30 the irrigated area had risen to 51 million acres, out of a total of 228 million acres sown with crops (22·4 per cent). The area irrigated fluctuates from year to year. It amounted to 49 million acres in 1920-21, 43 million acres in 1927-28, about 49 million acres in 1931-32, and 51·3 million acres in 1935-36.

The means of irrigation are canals (both Government and private), tanks and wells. Of all Provinces, the Punjab has the largest irrigated area, 14·4 million acres in 1934-35 out of 29·8 million acres sown. Of the irrigated area in the Punjab, about 10 million acres were irrigated by Government canals, 400,000 acres by private canals, about 4·4 million acres by wells, and only 35,000 acres by tanks. A larger area is irrigated by wells than by canals in the United Provinces. Tanks are of importance in Madras and Bihar and Orissa. Taking British India as a whole, the area irrigated by different means of irrigation in 1934-35 was as follows:

	Million acres		
Government canals	22·4
Private canals	3·7
Tanks	6·2
Wells	12·5
Other sources	5·7

* Vol. IV, p. 251.

The reader is supposed to be familiar with the principal irrigation works in India, and particularly in the Punjab. The most wonderful of these is the Triple Canals System, which irrigates the Lower Bari Doab, lying between the Ravi and Sutlej rivers. It was completed in 1917 and commands an area of 4 million acres.

The Sutlej Valley Project commands an area of 5 million acres, of which about 3 million acres are in the Bahawalpur State. The Thal Project is being revised. The Haveli Project which has been completed, will bring 375,000 acres of waste-land under cultivation. The financial and other aspects of the Bhakra Dam Project are being examined.

Tube wells as a means of irrigation have been tried in the United Provinces and the Punjab. Irrigation from tube wells has been found to be expensive—it pays only when valuable crops like sugar-cane, potatoes, and tobacco are grown by intensive methods of cultivation.

While there cannot be any dispute about the benefits of canal irrigation, its rapid development in the Punjab has given rise to one of the most serious problems that the Province has ever been confronted with—water-logging.

The consequences of water-logging are so terrible, whether viewed from the standpoint of the fertility of land and agricultural production, or that of the general health of the population, that the subject is well worth our attention.

There is no agreement as to the precise definition of water-logging, but for our purposes we may define the term as the rise in the level of sub-soil water which renders land unfit for cultivation.

The approach of the danger is marked by certain well-known stages. At first, for one or two years, *barani* crops are unusually successful and there is a spontaneous growth of a rich crop of *maina*. In the third year patches *hallar* (salts) begin to appear on the affected fields; and seed does not germinate on these patches. Yields begin to diminish and the patches extend until they cover the whole field. Depressions in close proximity to the canal remain permanently damp and have water of a rusty colour. The spring level rises and comes close up to the surface of the land.

Houses in the *abadi* begin to crumble to dust and eventually collapse. An obnoxious odour is emitted by *abadies*, and drinking water tastes raw.

Water-logging is due to the rise in the spring level. When it has risen so much that it is only within a short distance of the ground surface, water is drawn up by capillary attraction, as a piece of blotting paper, whose edge is dipped in water, sucks up water. The affected land then is covered with *kallar* and finally it is turned into a swamp.

If a well is sunk in any place, water is found at a certain depth. It may be nearer the surface in one place and at a greater distance in another. Suppose water is found at a distance 20 feet from the ground surface. In technical language it will be said that the spring level or the water-table is 20 feet below the surface. Now if the water were pumped out the well would be found to be full again after a certain time.

More exactly, the spring level may be defined as the level up to which the underground soil is completely saturated with water. The terms spring level and water-table are often used interchangeably, but the "spring level" refers to a particular locality, say a village, while the water-table refers to a wider-area.

The sources of sub-soil water in a tract are mainly three:—

- ✓ (1) Percolation from the rivers and hills bounding the tract.
- ✓ (2) Rainfall.
- ✓ (3) Percolation of canal water, which may be subdivided into percolation (a) from main canals and branches, (b) from distributaries, (c) from water-courses and (d) of water put on the land.

Percolation of water from rivers can never cause water-logging. The level of water in a river is much below the ground surface and the spring level cannot rise above the river level (canal irrigation is flow irrigation, or by gravity, and the level of water in the canal must be higher than the ground level).

Secondly, water-logging is not caused by rainfall. In the first place, when light rain falls on thirsty soil, the soil, as it were, drinks it up. In such a case no water percolates to the water-table.

Suppose now there is a heavy and continuous downpour for several days. A considerable part of it would be immediately carried away by surface drainage; a part would be lost by evaporation and part by transpiration through vegetation. The remainder, a very small proportion of the total rainfall, will percolate to the water-table and cause it to rise, but temporarily. After the rains are over, in the dry period which follows, the water added to the sub-soil reservoir will be carried away by the sub-soil flow, and the water-table will be reduced to its previous normal level.

Of course when, on account of the canals, the spring level has already risen in a tract to within a short distance of the ground surface, rainfall may raise the spring level further, and water-logging may appear.

The action of canals on the water-table is both direct and indirect. Indirectly, when a canal has been so constructed that it intersects all the drainage lines of a tract, like the old Western Jumna Canal, by obstructing the surface drainage it will cause rain or flood water to be held up, and some of this water must, passing through the sub-soil, be added to the water-table. This also applies to irrigation channels and zaminders' embankments which obstruct the natural drainage of a tract.

As for the direct action of canals, if nothing intervened between the bed of a canal and the spring level, water percolating from the canal would fall vertically until it reached the spring level. But the whole space between the spring level and the canal bed is filled with soil. The soil nearest the sides and the bed of the canal first gets moist, and percolation goes on spreading on all sides until the spring level is reached. The spring level then begins to rise. The water added to the spring level would tend to flow away, but when the inflow of water owing to percolation exceeds the sub-soil outflow, the spring level continues to rise until equilibrium is restored by its rising above the ground level. When this happens the whole of the area surrounding a canal becomes water-logged.

It has been estimated that of the water taken in at the head works of the Punjab canals, about one-third is lost in the main canals and branches. Of the remaining water, that is water in the

distributaries and water courses, and that supplied to the fields for actual irrigation, also one-third percolates to the soil to raise the spring level.

In certain tracts, such as the Upper Bari Doab, we are told that equilibrium has been reached as regards the inflow and the sub-soil outflow of water and the spring-level there is not rising. "In others," says Mr. Wilson, "there are no signs that such an equilibrium will be attained before the water-table reaches the surface of the soil, whereby much valuable agricultural land will become lost to cultivation." Mr. Wilsdon refers to the steady rise of the water-table in these tracts and says: "We are thus faced with the immediate problem of saving valuable land and cities threatened within a few years, as well as the ominous trend in the water-table."*

It should be noted that any rise in the water-table is not disadvantageous. In fact, among the indirect benefits of irrigation, mentioned by the Irrigation Commission of 1901-03, was "the effect of irrigation and of large water storage works in increasing the humidity of the air, and in raising the level of the underground water supply." The rise in the level of sub-soil water is advantageous as it makes well-sinking and the working of wells easier. It is also good for the crops as it increase the moisture of the soil. An expert witness stated before the Agrucultural Commission that if the sub-soil water can be kept at a certain depth below the ground level, 15, 18 or 20 feet, that water-table is a gold mine.† The water-table ceases to be a gold mine and becomes a curse only when it rises to within a short distance from the ground surface, say 3 or 4 feet. It then becomes a grave source of danger to public health as well as to cultivation. In the interests of health the water-table must not be allowed to rise to a distance of 8 to 15 feet from the ground surface.

Water-logging is an old problem and it has a history.

The worst instance of water-logging is perhaps that related in the District Gazetteer of Karnal (1892) on the Western Jumna Canal about a hundred years ago. It produced such horrible results

* Agl. Com. Evidence, Vol. VIII, p. 410.

† Agl. Com. VIII, p. 457.

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that one hopes that the lessons taught by this history will never be forgotten.

The Western Jumma Canal is an old canal. It was constructed by Firoze Shah Tughlak in the 14th century. Water was taken from the right or western bank of the Jumma and carried over a distance of about 150 miles to irrigate the King's favourite hunting ground at Hissar. The canal silted up during the reigns of Firoze Shah's successors, but it was repaired during Akbar's reign by the Governor of Delhi for the irrigation of his private estates. The canal stopped again about the year 1647. It was repaired under the direction of Ali Mardan Khan, the celebrated engineer of Shah Jahan, and a new channel excavated to carry water into the city of Delhi. During the decline of the Moghul Empire the canal again gradually silted up until it ceased to flow. One does not know when the next repairs were carried out, but in 1820, 155 acres were irrigated from the canal and the irrigated area increased rapidly to 33,000 acres in 1825 and 321,000 acres in 1840.

A famine visited Karnal in 1833-34 and caused heavy loss of life. The famine gave a great impetus to canal irrigation. The demand for water increased and the area irrigated was limited only by the means of supply. The failure of the rains in 1836-37 increased the demand for canal irrigation still more. Strenuous efforts were made by irrigation officers to increase the supply, and every facility was offered to such villages as would make use of the water. In most cases the old imperial water-cuts still existed, which the village people were allowed to clear out and use; or they made themselves a channel straight from the nearest point on the canal from which water would flow to their fields. The Government constructed new large distributaries and deepened, enlarged and extended the old ones. The main channels were also deepened and their banks raised till the water in them touched the crown of the arches in the bridges. Most of these extensions were made hurriedly under the pressure of urgent need. The system of embankments of the canal had been constructed with so little reference to the natural drainage that it intersected all the drainage lines of the tract and threw back the surface water over the surrounding country. The carrying capacity of the canal, whose alignment was faulty, and of the channels, says the District Gazetteer for Karnal, "has been so increased that in most parts the surface level of the water, and in some places the bed of the canal, is above the surrounding country, and the water is thus forced into the sub-soil by hydraulic pressure."

In addition to this forcing of water into the sub-soil by hydraulic pressure, there was over-irrigation. One may say that most canal-irrigated tracts suffer from over-irrigation, on account of the wasteful methods of irrigation practised by the cultivator. Canal irrigation is not like well irrigation. Every

drop of well water costs time and effort. Not a single drop of well water is wasted as it means so much labour for men as well as cattle. But in the case of canal water the same reasons for economy do not exist. A second important point may next be noted. Well water is itself drawn from the sub-soil water. When it is used for irrigating a field, a certain amount of it is lost by evaporation and transpiration through vegetation, and to that extent the sub-soil supply is reduced. Canal water is not drawn from the sub-soil supply, and excepting that part which is lost like well-water, all the canal water that is used for irrigation represents an addition to the sub-soil supply.

What was the combined result of a faulty alignment of the canal, a wrong system of embankments and over-irrigation? "The result is," says the District Gazetteer "that the whole country is water-logged by the canal water being forced into it from below, while the cultivator drenches it from above." And when heavy rain came, it fell upon a country already saturated with water. For miles and miles the whole country was covered with water.

Not only was cultivable land thus turned into swamps; *kallar* soon appeared. It has been explained above that when sub-soil water has risen to within a short distance of the surface it is drawn up to the surface. On evaporation it leaves the salts it contains deposited, and this process repeated for several years covers the soil with a layer of alkaline salts, lying like fresh fallen snow, often 3 to 4 inches thick. The soil is now useless for cultivation. Such grass as is able to spring up in the salt-impregnated land gives the cattle diarrhæa, enfeebles and eventually kills them. The whole country exhales from its putrifying vegetation a malaria which destroys the vitality of the cultivators and kills them by fever and spleen disease.

In 1841 an epidemic of fever ravaged the whole of the Delhi territory and the mortality was so great that in many places the crops died for want of persons to look after them. Two years later another and even more terrible epidemic devastated the country. This led to the appointment of a committee by the Government of India to investigate the matter, and a further enquiry was made in 1867 by Surgeon-Major Adam Taylor. Both enquiries conclusively proved that the effects of water-logging on the health of the people in the canal tract had been disastrous. Another enquiry had been made by Mr. Sherer in 1856. He showed that the water level had been raised by the canal from some 60 feet to, in many places, two or three feet from the surface, and that the fertility of soil had been very greatly diminished. In his report he spoke of "the miserable disease engendered by the tainted water and malarious exhalations of the soil: of the spectacle of sick women and diseased children crouching among the ruins of their houses (for in many cases the rafters had been sold); of haggard cultivators wading in the swamps and watching their

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sickly crops, or attempting to pasture their bony cattle on the unwholesome grass.”*

We learn from the District Gazetteer that an estimate for remodelling the canal amounting to 72 lakhs was sanctioned in 1874 and this was increased to 102 lakhs in 1881. In 1885 a full supply was carried in the new main channel. With the remodelling of the alignment of the canal, and the draining of the depressions in the ground surface by a well designed system of drains, water-logging ceased.

The spring level was only some 7 or 8 feet below the surface in the civil station and other environs of Amritsar City in 1913. “Twenty years ago,” says the author of the Settlement Report of the Amritsar District, 1910—14, “the last Settlement Officer estimated that the water level had risen about 10 feet in the Amritsar Tehsil between 1865 and 1892 owing to infiltration from the canal and to a smaller extent in the other two Tehsils.” The rise steadily continued after 1892, which Mr. Craik estimated at not less than 6 feet in 1914 where canal irrigation was most profuse. Widespread floods had occurred in the Amritsar District after the very heavy rainfall of August and September, 1908, followed by a severe epidemic of malaria, in which mortality “reached the appalling figure of a plague epidemic.” The connection between water-logging and the epidemic was obvious, and efforts were made to improve sanitation by deepening and widening natural drainage channels, and the provision in some localities of artificial drains. In 1911-12 again conditions in and around Amritsar became very insanitary, due to the steady rise in the sub-soil water level. The proposal to curtail irrigation was considered, but the Settlement Officer was doubtful if such curtailment would have the desired effect of lowering the water-table, and he was certain that it would provoke great resentment among the peasantry. Canal irrigation, as is well known, costs much less per acre than well irrigation, and in all parts of the district the number of wells has steadily decreased with the expansion of canal irrigation. Finally in 1912 it was decided to replace canal irrigation on about 9,000 acres in the affected tract by water pumped from tube-wells.

* Karnal District Gazetteer, 1892, Appendix.

The Amritsar pumping scheme consists of 15 tube-wells sunk in a line nearly 4 miles long with a pumping capacity of 30 cubic feet per second. The scheme cost 5 lakhs. Financially it has been a loss, but the water-table has gone down and the sanitary condition of Amritsar has improved.

The foregoing historical account of water-logging is interesting for two reasons: first it serves to illustrate the effects of water-logging, and second, it suggests the remedies.

We have seen that when a canal is so constructed that it obstructs the natural drainage of a tract, a remodelling of the canal may be necessary. This means the construction of a new channel, as was done in the case of the Western Jumna Canal at a cost of over a crore of rupees. Fortunately, we are told, the later canals leave little to be desired in this respect.

The question of improving the natural drainage of the country has been engaging the attention of the Government for a long time. A Drainage Board was constituted in 1918. The Board dealt only with water-logging in rural areas and concentrated its attention on certain specific schemes in the Amritsar, Lahore and Karnal districts. From the 1st April, 1926, the Punjab Drainage Board was reconstituted under the name of the Rural Sanitary Board. It is concerned with measures intended for the benefit of rural as distinct from urban areas, the latter being in charge of the Urban Sanitary Board.

To prevent percolation from a canal to the water-table the banks and the bottom of the canal are sometimes waterproofed. The Gang Canal, which takes out from the Sutlej at Ferozepur and carries water for irrigation to the Bikaner State, is lined for its entire length of about 82 miles with concrete. The lining of a canal is very expensive. Apart from the cost of construction, the lining of the Gang Canal cost about a crore. The expense of lining all the Punjab canals and distributaries would be enormous.

The lining of a canal is not simple. This may be judged from the statement of an irrigation engineer before the Agricultural Commission. "There is one area," he said, "where water-logging threatens to be most severe. There is a feeder canal called the

Upper Chenab which takes water from the Chenab to the Lower Bari Doab. It runs constantly, and is a big 200 feet canal with a depth of 10 to 11 feet. How are you going to line such a channel as that?"

Lining, again, is only a partial remedy. We have seen that of the water actually put on the land for irrigating a field, about one-third goes down to the water-table. Lining will not prevent the rise of the water-table due to percolation from the fields and cultivators' channels.

Apart from the opening out of closed and obstructed drainages, the only two remedies against water-logging which have been found effective are (1) replacing canal irrigation by irrigation from wells and (2) by pumping from sub-soil. It is thought that as soon as the spring level in a tract tends to rise within 10 feet of the natural surface, the restriction of canal irrigation in the manner stated is necessary to check the further rise of the spring level.

It is a matter for regret that the area irrigated from wells in the Punjab has decreased steadily on account of the extension of canal irrigation to tracts formerly dependent on wells. It amounted to 4·6 million acres in 1868-69, 3·9 million acres in 1920-21 and 3·8 million acres in 1931-32. The explanation lies in the fact that the cost of irrigation from canals is very small as compared with that from wells. The figures given by the Agricultural Commission are Rs. 3-8 per acre for canal irrigation and no less than Rs. 22 per acre for irrigation from a well. In view of the great difference in cost, it is not surprising that wells have been superseded by canals as the source of water supply in the areas served by the canals.

Incidentally it may be mentioned that the difficulties connected with the construction of wells by private enterprise are very great where the holdings are very small in size and where there is much fragmentation of holdings.

It will be easily understood that the restriction of canal irrigation by turning some perennial canals into Kharif canals is resisted

by the zamindar. An example is given by R. B. Wazir Chand Chopra, Superintending Engineer, in his interesting note printed in Vol. VIII of the Evidence given before the Agricultural Commission. In the case of the upper reach of the Hafizabad Distributary, where irrigation was once abandoned on account of water-logging, and where some improvement had taken place as the result of the construction of seepage drains, the restoration of irrigation was contemplated for Kharif crops only, but, as a matter of fact, perennial irrigation was sanctioned in the end.

It is obvious that where water-logging is threatened, canal irrigation must be restricted. It means hardship for the cultivator on account of the much greater cost of well irrigation, but water-logging means disaster.

We have seen that pumping from sub-soil has been successfully tried in Amritsar. The chief hope of success in dealing with water-logging lies in the development of schemes of pumping sub-soil water by means of tube-wells. This water can, of course, be utilised for irrigation in the place of canal water. The cost, however, will be greater. It is estimated that the cost of water pumped from the sub-soil will be about Rs. 10 per acre. In order that the pumping installation may pay (in Amritsar it is working at a loss) the consumer may have to pay a rate of Rs. 12 to Rs. 15 per acre compared to the present canal rate of less than Rs. 5 per acre.

In this connection the progress of the Mandi Hydro-Electric Project (opened in March, 1933) will be watched with great interest. The Mandi scheme utilises the waters of the river Uhl, which joins the river Beas at a point about 5 miles east of Mandi, for generating electric power. When the whole scheme is in operation, power could be supplied to over 47 towns, extending from Delhi and Rohtak in the south to Sialkot and Lyallpur in the north, at a very cheap rate. The development of the scheme is of considerable importance from the point of view of remedial measures which are to be adopted for dealing with water-logging. By providing a cheap source of power for the working of tube-wells, the Mandi scheme may make an important contribution to the solution of our problem.

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Finally, we may consider the means of preventing over-irrigation, or the enormous waste of canal water by the cultivator. We have seen that over-irrigation must tend to increase the sub-soil water supply. It has been estimated that the amount of excess water applied to crops such as wheat in Northern India is from 30 to 50 per cent. In the Punjab water is charged for by the area of the crop matured, and the rate per acre differs for different crops. When water is sold per acre, and not by volume, the cultivator has no incentive to be economical in its use. The Agricultural Commission were also of opinion that wastage is also caused by the uncertainty of supply. In the case of well irrigation, the source of supply, the well, is always at hand. The supply is certain, which renders it unnecessary for the cultivator to apply water to his crops in excessive quantities at any time, quite apart from the question of labour involved in working a well, which effectually prevents waste of well water. "With canal irrigation," to quote the Agricultural Commission, "the cultivator often does not know definitely when the next watering will be possible; he therefore applies water in large quantities in the hope that this will tide him over the period of unknown length during which it is not available." (*Report*, p. 335). The result is not merely an enormous waste of water, but damage to crops and the land.

It is certain that if water were charged for by volume, the cultivator would very soon develop more economical habits in its use. But irrigation engineers generally doubt if the sale of water by volume to small cultivators is practicable. However, improvements have been made in the existing area system of distribution by means of which considerable economy of supply has been effected.

The Punjab Irrigation Report for 1926-27 stated that the area actually thrown out of cultivation by the rise of sub-soil water to the ground surface was about 125,000 acres, and the *Punjab Administration Report* for the same year estimated that there was danger of expansion of water-logging to the extent of 700,000 acres more. "The area affected has been steadily growing in past years," said the *Punjab Administration Report* for 1930-31.

In certain districts (e.g., Lahore and Sheikhupura) alkaline area (thur) was increasing, while in other cases there was a reclamation of sem or swamped areas. The problem was considered "serious"† in eleven districts. It was "most acute"‡ in the area lying between the Jhelum and Ravi rivers.

During the past 4 or 5 years considerable progress has been made in fighting water-logging. Special thur and sem surveys are carried out every year. The Irrigation Report for 1936-37 states that from kharif 1935 to kharif 1936 the total area reported as thur increased from 348,311 acres to 399,541 acres mainly in Sheikhupura and Gujarnwala districts. Out of this thur in cultivated land increased from 47,266 acres to 54,446 acres. For the same period sem area decreased from 28,969 acres to 28,660 acres: "This shows that while the reported increase in thur is alarming, we have little to fear from water-logging." (Report, p. 10).

It is considered that the opening up of the natural drainage lines of the country together with the draining of all accumulations of standing water will help in delaying the rise of the water-table. The Punjab Irrigation Research Institute is examining statistical problems connected with water-logging, including the correlation of rainfall with the rise of the sub-soil water-table.

The Water-logging Board has recommended the adoption of a five-year drainage programme for the construction of a comprehensive net-work of main drains in the Chaj and Rechna Doabs for carrying off rain water. Precautions are being taken to prevent rain water from reaching the sub-soil in critical areas.

Irrigation engineers now take a more optimistic view of the problem than they did before. For example, Mr. Kanwar Sain, I.S.E., Director, Central Designs, Haveli Project, thus speaks of the 'bogey of water-logging' in his valuable paper entitled 'Finances and Economics of Irrigation Projects' read before the 1939 session of the Punjab Engineering Congress:

"Thanks to the efforts of Mr. J. D. H. Bedford the majority

† *The Punjab Administration Report for 1931-32*, p. 20.

‡ *The Punjab Administration Report for 1932-33*, p. 83.

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is now veering round to the opinion that water spread over land in small depths for irrigation purposes does not cause water-logging; the main cause of water-logging is percolation from the large canals and from deep volumes of water standing on the land. Mr. (now Sir) W. Roberts expressed the view that 'the great bulk of the irrigated area of the province would be perfectly safe from the evil of water-logging if three times the present supply was given.'

"The areas affected by *thur* and *sem* up to the 30th September 1938 were 466,413 and 29,349 acres respectively. The *sem* area is less than 0.25 per cent of the total irrigated area. For the *thur* area there is actually a keen demand for extra water. While immediate steps are required to arrest water-logging, it is urged that future irrigation projects should not be withheld on this account" (p. 249).

CHAPTER V

INDUSTRIAL PRODUCTION

There is no lack in India of raw materials required for the development of metallurgical industries. This fact was well known to the ancients. Nearly 300 B. C. Megasthenes wrote that India "has under-ground numerous veins of all sorts of metals, for it contains much gold and silver and copper and iron in no small quantity, and even tin and other metals which are employed in making articles of use and ornament as well as the implements and accoutrements of War."*

Writing in 1881 in the introduction to his "*Economic Geology of India*," V. Ball thus commented on the passage quoted above:—

"To many it may appear that it was a fanciful and fabulous India, very different from the country as it is now known to us. To such the facts set forth in this work not only as to the extent of the mineral resources, but also as to the extent of the ancient mining operations, will come almost as a revelation.

"Speaking generally, the value of the majority of the deposits is relative to external circumstances. Were India wholly isolated from the rest of the world, or were her mineral productions protected from competition, there cannot be the least doubt that she would be able, from within her own boundaries, to supply very nearly all the requirements, in so far as the mineral world is concerned, of a highly civilized community. But the consumer would probably have to pay more than he does at the present day."

About 1881, however, no important metallurgical industries, working on modern lines, existed in India. It was in 1885 that the Mysore Gold Company was founded. The Barker Iron Works were, indeed, established in 1875, but it was not until 1899 that the Company succeeded in producing pig iron at a profit. Thus, at the beginning of the present century, the only successful metallurgical works were the gold mining and reduction plants of Kolar and the Barker Iron Works. Great progress has, however, been made during the past 30 years. In 1903 the Hutti Gold Mines

* "*Industrial Handbook*," published by the Indian Munitions Board, p. 123.

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(Hyderabad State) commenced operations. In 1909 the Burma Mines, Limited, was started. The Indian Iron and Steel Company was floated in 1918 with the object of producing pig iron. In the same year the regular production of blister copper began in India.

There is said to be a 'surplus' of a metal or mineral when it is exported; when home production has to be supplemented by imports, the supply is 'insufficient,' and when the production is equal to consumption, and there are neither exports nor imports, the supply is described as 'sufficient.' The statement given below classifies the principal minerals and metals under these three heads:

Insufficient	Sufficient	Surplus
Aluminium.	Ferro-manganese.	Antimony.
Arsenic.	Fuller's earth.	Chrome ore.
Asbestos.	Gypsum.	Bituminous non-coking
Barytes.	Heavy Benzine.	and coking coal and
Borates.	Talc (a magnesium	anthracite.
Brass.	silicate).	Copper matte.
China Clay.		Gold.
Coal tar and pitch.		Iron ore, pig iron and
Sulphate or ammonia.		steel.
Copper.		Pig lead.
Diamonds.		Magnesite.
Ferro alloys.		Manganese ore.
Graphite.		Mica.
Crude petroleum.		Monazite.
Petrol, including benzine and dangerous spirits.		Nickel speiss.
Kerosene.		Paraffin wax.
Fuel oil.		Saltpetre.
Lubricating oils.		Ilmenite.
Phosphates.		Tungsten.
Potash chemicals and manures.		
Quicksilver.		
Salt.		
Silver.		
Sulphur.		
Tin.		
Zinc.		

(Source: *Records of the Geological Survey of India*, Vol. LXVI, Part 4, pp. 529—32).

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The total value of minerals produced in India is shown below:

				Million £
Average 1919—23	25·2
1924	..	..	..	28·7
1926	..	..	..	25·8
1927	..	..	..	22·9
1928	..	..	..	21·9
1929	..	..	..	22·3
1930	..	..	..	19·8
1931	..	..	..	17·7
1932	..	..	..	15·6
1933	..	..	..	16·6
1937	..	..	..	25·2

The whole of the increase in value of £3·5 millions in 1924, as compared with the average for 1919—23, was not real, being due in part to the higher average value of the rupee during that year. From 1924 to 1928 the value of the minerals produced declined steadily. In 1929 there was a slight increase in value but the decline was resumed in 1930, to be arrested in 1933. There was a considerable increase in value in 1936—37.

AVERAGE PRICES IN THE UNITED KINGDOM OF PRINCIPAL METALS AND ORES IN 1929, 1933 AND 1937.

	1929. £ per ton.	1933. £ per ton.	1937. £ per ton.
METALS—			
Copper, standard ..	75·48	32·39	54·50
Lead, pig, soft foreign ..	23·24	11·80	23·30
Speltre, ordinary ..	24·88	15·74	22·34
Tin, standard ..	203·94	194·59	242·33
Pig-iron, Cleveland No. 3	3·52	3·03	4·60
Steel rails ..	8·50	8·37	9·55
Ferro-manganese ..	13·53	11·25	16·60
Gold, fine, per oz. ..	84·941s.	124·802s.	140·666
Silver, standard, per oz	24·614d.	18·148d.	20·071
ORES—			
Chromite, per ton ..	£4·296	£4·625	4·425
Manganese ore, per unit	14·0d.	9·5d.	22·50
Wolftram, per unit ..	29·28s.	15·42s.	69·833

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Attention may be drawn to the heavy fall in the price of copper, pig lead, speltre, manganese ore and wolfram in 1933 and the remarkable recovery in 1937.

COAL

The coal industry has grown rapidly since 1897, in which year production amounted to a little over 4 million tons. This may be compared with the peak production of 25 million tons in 1937.

The coal industry is suffering from overproduction and the consequent heavy fall of prices. The consumption of coal in India is estimated at 18 million tons, while the producing capacity is 26-27 million tons annually. The price of coal has fallen from Rs. 12 per ton at the pithead in 1924 to a little more than Rs. 3.

The coal interests complain that the Government have retarded the industry by purchasing coal-bearing lands and producing coal themselves for the State-owned Railways. The use of fuel oil in place of coal, as on part of the North-Western Railway system, is also objected to. It is admitted that the Railway Board have assisted the coal industry by restricting the production of State-owned collieries, but this is not considered enough.

The embargo on the export of coal, imposed by the Government of India in July, 1920, was responsible for the loss of important overseas markets. Of these Ceylon has been recovered, but the Straits Settlements and other Eastern markets have been captured by South African coal.

The Coal Grading Board was constituted in 1925 and commenced operations in 1926. The object of this Board is to ensure that only good-sized coal is exported. The Coal Grading Act provides for the grading of seams of coal and for the grant of certificates for coal intended for export. The exports of coal fell from 685,000 tons in 1928-29 to 373,000 tons in 1933-34 and about 250,000 tons in 1936-37. But exports suddenly increased to 1 million tons in 1937-38.

Regulated production is the way suggested out of the 'Valley of Despair' in which mine-owners at present find themselves. The industry on an average employs 195,000 workmen daily. The

continued weakening of the industry would lead to an undesirable reduction of wages and salaries, and financial losses to the industry, the investing public and to Government revenues. The fall of prices, further, limits production to seams of the best quality coal, and makes it difficult to improve the methods of extraction.

The industry has asked for legislation for the control of production. The mine-owners have sought Government help because they fear that their unaided efforts to control output will not be successful. No marketing scheme will solve the difficulty, for "overproduction is the source of the disequilibrium, not distribution."¹

A change for the better occurred towards the end of 1936, when signs of over-production temporarily disappeared. There was a general revival of industrial activity in 1935 and its pace quickened at the end of 1936. New companies were being floated, mills were working double shifts and the railways were carrying more traffic and were thus consuming more coal. The genuine demand for coal consequently increased. Apart from this, an exceptionally good harvest in 1936 caused a serious shortage of miners who returned to their villages, and the production of coal declined. The price of coal rose even to Rs. 7 per ton delivered into wagons at pits' mouth. But it rose only to fall heavily again. Over-production has re-asserted itself.

The sudden increase in the exports of coal in 1937-38 was chiefly due to the ban on the exports of coal from South Africa. The ban has been lifted and exports from India will in the coming years tend to decline. Japan will again become a serious competitor when the war in China ends. Increased exports therefore cannot be relied upon for the adjustment of the increased supply to demand: "The corrective therefore must come from the supply side." It is doubtful how far increased industrial activity in India will absorb the greater output of coal. Solution of the difficulties of the coal industry seems to lie in curtailment of production.

¹ Capital, Trade and Industries Supplement, December, 1934, p. 50.

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MANGANESE

The output of Manganese was 902,000 tons in 1907, and 1,129,000 tons in 1927, valued at £2·7 millions. After 1927 both the output and its value fell. In 1933 the output was only 218,000 tons, valued at £123,000. These are the smallest quantities and values reported since 1901.² The quantity of the production in 1933 was a little over one-fifth of that of 1927 and the value less than one twenty-second part of the value of the 1927 production. No major Indian mineral industry suffered from the effects of the collapse of prices so much as the manganese industry. The heavy fall in the price of manganese ore, from 22·9*d.* per unit in 1924 to 9·5*d.* per unit in 1933 was due to world overproduction. Russia's non-economic methods of exploitation and finance were responsible for the crisis in this industry. While supplies increased, demand fell on account of the declining production of iron and steel. The world's output of steel fell from 122 million tons in 1929 to about 68 million tons in 1931 and only 50 million tons in 1932. The output rose in 1933 to 69 million tons, which slightly raised the price of manganese in 1934.

In 1937 the quantity of manganese produced increased to over 1 million tons, valued at over £3 millions.

The chief sources of production of manganese ore are India, Russia, the Gold Coast, South Africa and Brazil. The output of Egypt and Czecho-Slovakia is also appreciable.

The exports fell from the post-war (1919-20 to 1923-34) average of 648,000 tons to 266,000 tons in 1933-34, but rose to 627,000 tons in 1936-37, and over 1 million tons in 1937-38.

Petroleum.—The world production of petroleum in 1933 was estimated at 198 million tons. The contribution of the United States to this total was 62·5 per cent, Russia 10·6 per cent, Venezuela 8·3 per cent, and India 0·62 per cent. The quantity produced in India was 306 million gallons in 1933 and 350 million gallons in 1937.

Gold.—The chief centre of gold mining is Mysore (Kolar gold fields). The two deepest mines on this field have reached depths of 7,960 and 8,224

² *Records of the Geological Survey of India*, Vol. LXVIII, Part 3, p. 277.

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feet (the Champion Reef and the Oregum Mines respectively). The rock temperature at these depths is very high, 133 degrees F., and the maintenance of adequate ventilation at the working places is becoming a difficult problem.

Mica.—The reported quantity produced in 1937 was 104,478 cwts; exports exceeded the output (294,000 cwts. in 1937-38). The difference is due to theft from the mines.

Salt.—In 1937, excluding Aden and Burma, India produced 1,493,000 tons of salt from the sea, subsoil or lakes, and 187,000 tons of rock-salt. Imports in 1937 amounted to 339,000 tons.

Saltpetre.—No figures of production are available, but exports indicate the general state of the industry, as, excepting a few hundred tons required for internal consumption as fertiliser, the whole of the output is exported. Exports increased from 134,000 tons in 1931-32 to 188,000 tons in 1933-34, but fell to 171,000 tons in 1934-35, and 158,000 tons in 1937-38.

✓ India's probable resources in aluminium ore are estimated at 34 million tons, and potential resources at 100 million tons.

The proved reserves of coal (Gondwana coal-fields) in 1931 were put at 5,000 million tons of good quality. The probable resources in coal are estimated at 20,000 million tons, and potential resources at 60,000 million tons in seams of over 4 feet thick at workable depths. In addition there are 6,000 million potential tons of tertiary coal in Assam.

The proved reserves of copper ore (1931) amount to about 800,000 tons, and of lead ore to over 4 million tons. The probable resources in iron ore (Hæmatite, containing 60 per cent of iron) are estimated at 3,000 million tons.³

MANUFACTURING INDUSTRIES

The industrial backwardness of India† is due to several causes, among which the neglect of applied science, the *laissez*

³ *Records of the Geological Survey of India*, Vol. LXVI, Part 4, p. 476.

† The Indian Industrial Commission (1916-18), thus described the deficiencies in the production of articles:—

“The blanks in our industrial catalogue are of a kind most surprising to one

faire policy of the Government in the past, and the shyness of Indian capital for modern enterprises may be specially mentioned. As is well known, one of the most important causes of Germany's industrial leadership is her zeal for scientific studies and the application of science to practical problems. In India, till recently, the study of science occupied a very minor place in the educational system. The education imparted in our schools and universities is still mainly of a literary type, which accounts for the utter lack in India of scientific business experts who could help in the organisation of industries and who have, therefore, to be imported. Again, as we have seen, in industrial matters, the Government in the past, with

familiar only with European conditions. We have already alluded generally to the basic deficiencies in our iron and steel industries, and have explained how, as a result of these, the many excellent engineering shops in India are mainly devoted to repair work, or to the manufacture, hitherto mainly from imported materials, of comparatively simple structures, such as roofs and bridges, wagons and tanks. India can build a small marine engine and turn out a locomotive, provided certain essential parts are obtained from abroad, but she has not a machine to make nails or screws, nor can she manufacture some of the essential parts of electrical machinery. Electrical plant and equipment are still, therefore, all imported in spite of the fact that incandescent lamps are used by the million and electric fans by tens of thousands. India relies on foreign supplies for steel springs and iron chains, and for wire ropes, a vital necessity of her mining industry. We have already pointed out the absence of any manufacture of textile machinery, and with a few exceptions, even of textile-mill accessories. The same may be said of the equipment of nearly all industrial concerns. The list of deficiencies includes all kinds of machine tools, steam engines, boilers, oil and gas engines, hydraulic presses and heavy cranes. Simple lathes, small sugar mills, small pumps and a variety of odds and ends are made in some shops, but the basis of their manufacture and the limited scale of production do not enable them to compete with imported goods of similar character to the extent of excluding the latter. Agriculturists' and planters' tools such as ploughs, *mamooties*, spades, shovels and pickaxes are mainly imported, as well as the hand tools of improved character used in most cottage industries, including wood-working tools, heels and reeds, shuttles and pickers. Bicycles, motor cycles and motor cars cannot at present be made in India, though the imports under these heads were valued at Rs. 187 lakhs in 1913-14. The manufacture of common glass is carried on in various localities, and some works have turned out ordinary domestic utensils and bottles of fair quality, but no attempts have been made to produce plate or sheet glass, while optical glass manufacture has never even been mooted. The extent of our dependence on imported glass is evidenced by the fact that in 1913-14 this was valued at Rs. 164 lakhs. Porcelain insulators, good enough for low tension currents, are manufactured, but India does not produce the higher qualities of either porcelain or china. Attention has been directed to the building of steel ships, but until the local supply of steel has been greatly increased, it is more than doubtful if expectations in this direction can be realised, and it is probable that there are other ways in which our present relatively small supplies of Indian steel can be quickly and more profitably utilised." (Report, 55).

few exceptions, followed a 'let alone' policy. "The political and economic conditions of India," wrote the Industrial Commission, "have created a large export and import trade, and this trade has brought about the present industrial position.* Unrestricted freedom of importation is responsible in no small measure for the industrial backwardness of India. It largely explains the shyness of Indian capital for modern enterprises. There was never any serious lack of capital in India, but Indian capital was chiefly invested in agriculture and a few manufacturing industries, as jute and cotton. Profits in most of the industries affected by foreign competition were very uncertain, and Indian capital avoided these industries." Lastly, in the purchase of Government stores very little advantage was taken of the rules intended to encourage the purchase of locally manufactured articles, and Government Departments generally indented on the India Office for their requirements.

The War forced the Government of India to direct their attention to the question of developing Indian industries. The unprecedented shrinkage of imports made the country realise, as it had never realised before, the terrible consequences of too great dependence upon other countries for the supply of things essential in peace and war. The Industrial Commission emphasized the danger of industrial deficiencies in the following words:—

"The list of industries which, though their products are essential alike in peace and war, are lacking in this country is lengthy and almost ominous. Until they are brought into existence on an adequate scale, Indian capitalists will, in times of peace, be deprived of a number of profitable enterprises, whilst in the event of a war which renders sea transport impossible, India's all important existing industries will be exposed to the risk of stoppage, her consumers to great hardship, and her armed forces to the gravest possible danger."*

Every effort was made by the Government during the War to develop industries whose products were required, directly or indirectly, for war purposes. The Indian Munitions Board was established in February, 1917. The functions of the Board were "to control and develop Indian resources with special reference to the needs

* Report, p. 49.

* Report, pp. 55-56.

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created by the War,—to limit and co-ordinate demands for articles not manufactured or produced in India, and to apply the manufacturing resources of India to War purposes with the special object of reducing demands on shipping.” The primary object of the Munitions Board was to meet the demands of the armies operating in Mesopotamia, but it helped very materially in the development of Indian industries by purchasing in India articles and materials needed for the civil and military departments and for the railways; by diverting, so far as it was practicable, orders for articles and materials from the United Kingdom to manufacturers in India; by giving assistance to individuals and firms who desired to import plant or to engage technical and chemical experts and skilled labour from England or elsewhere in order to establish new industries or develop old ones; and by the dissemination of information and expert advice and the giving of other direct or indirect encouragement to persons prepared to establish new industries in India. During the 18 months, from 1st April, 1917, to the end of September, 1918, the Board spent 34 crores of rupees. The stores were purchased by the Board mainly from Indian firms.

The Munitions Board paid special attention to the encouragement of ‘key’ industries. For example, some of the accessories used by the milling industries in India, such as roller skins, pickers, sheep skins for rice-polishing, belting, etc., are now made in India. Other industries to which considerable attention was paid were the manufacture of anti-friction metal, ferro-manganese, glass, pottery, refractory bricks, disinfecting fluids, tea-pruning knives, tea chests, asbestos, boiler composition, glucose, coir articles and graphite crucibles.

Apart from action taken by the Government to encourage Indian industries, the rise of prices caused by the heavy decrease in all kinds of imports gave a great stimulus to Indian manufacturing enterprise. Attempt was made by manufacturers to fill the gap caused by the shrinkage of imports. Old industries were strengthened and enlarged and new industries were established. But for certain causes, arising out of our pre-War industrial weakness, the growth of industries during the War would have been

even more rapid than it was. These causes were: (1) the difficulty of importing machinery and materials such as are not made in India; (2) the shortage of coal and coking plant and the shortage of railway wagons and coasting vessels; (3) the difficulty of procuring from abroad chemical and technical experts and (4) the shortage of skilled labour.

India's fiscal policy was examined by the Fiscal Commission of 1921-22. The report of the Commission was not unanimous, the minority recommending 'Protection' and the majority 'Protection applied with discrimination.' The difference between the two points of view, for all practical purposes, is slight, for protection must always be applied with discrimination. A Tariff Board was constituted in accordance with the recommendations of the Fiscal Commission. In dealing with claims for protection the Tariff Board has to satisfy itself (a) that the industry possesses natural advantages, (b) that without the help of protection it is not likely to develop at all, or not so rapidly as is desirable, and (c) that it will eventually be able to face world competition without protection.

The chief objects of the Commission in recommending the adoption of a policy of discriminating protection was to reduce the burden which protection inevitably imposes upon the consumer, to prevent the establishment of unsuitable industries (which might be the result if all kinds of industries were indiscriminately protected), and to minimise the effect of protection on the balance of trade, or to maintain a favourable balance of trade.

IRON AND STEEL

The first fruit of the labours of the Tariff Board was Act No. XIV of 1924 to provide for the fostering and development of the steel industry in British India. The Act authorised the Governor-General in Council to give bounties on steel rails and fishplates and on railway wagons to companies producing these articles, registered under the Indian Companies Act of 1913, with a rupee capital, and having a certain proportion of Indian Directors, and imposed duties of 30 to 40 per cent on imported iron and steel according to the stage of manufacture of the imported article, and

the requirements of the Indian industry. Protection in the first instance was granted for a period of three years, until the end of March, 1927. The rise in the rupee exchange after the passing of the Act and the continued depression in the steel industry in European countries led to two further enquiries by the Tariff Board in 1924 and 1925. The Tariff Board recommended the grant of bounties on the production of steel ingots subjects to a maximum of 50 lakhs for the year ending 30th September, 1925, and 60 lakhs for the eighteen months ending 31st March, 1927.

The situation was re-examined by the Tariff Board in 1926. It recommended the continuance of protection for a period of 7 years, that is until 1933-34. The system of bounties was discontinued on the ground that it was likely to prove very costly. The production of the Indian steel industry was increasing, and it was doubtful whether the revenue from the protective duties would be sufficient to cover the cost of the bounties. Further, an element of preference was introduced in the duties levied on imported iron and steel. Two scales of duty were adopted—"basic duty" and "additional duty." The "basic duty" was fixed with reference to the price of steel imported from the United Kingdom. All steel imported into India, whether from United Kingdom or the Continent of Europe pays the "basic duty." Continental steel also pays the "additional duty," which is based on the difference between the prices of British and Continental steel, making allowance for the difference of quality between the two.

The progress of the steel industry between 1926 and 1933 was satisfactory. The output averaged 404,000 tons in this period and amounted to 427,000 tons in 1932-33. In the year 1927-28 the Company's output was 429,000 tons and its share of the available market (i.e., of the consumption of products similar to its own) was 30 per cent; in 1932-33 the proportion rose to 72 per cent—which means that the whole of the fall in demand in this period was borne by imported steel. The imports of iron or steel fell from over 900,000 tons in 1927-28 and 1928-29 to 237,000 tons in 1932-33. They rose to 244,000 tons in 1933-34 and about 275,000 tons in 1934-35.

Between 1926 and 1933 the Tata Company maintained an output roughly equivalent to 75 per cent of their capacity. "This is no small achievement," as the Tariff Board said in its report on the iron and steel industry (1934). "Few steel industries in the world have been able to maintain such an output."⁴

The industry has been assisted by the weakening of foreign competition in recent years. Foreign manufacturers have been busy trying to meet the increased consumption demand in their own home markets, thus giving the Indian industry a chance which it has not missed. The works of the Tata Company have been extended and many of the steel products which were formerly imported from abroad will now be made in India.

Boom conditions prevailed in the industry in 1937. Though they have passed away and may not return 'the intrinsic position of the industry is healthy and sound.' The demand for steel in India is not likely to fall and the industry is well organised and working at low costs.

According to the *Statistical Abstract for British India* (1938) between 1932-33 and 1935-36 the production of pig iron increased from 880,000 tons to 1,541,000 tons; of steel ingots from 591,000 tons to 880,000 tons and of finished steel from 442,000 tons to 677,000 tons. It is stated in the *Review of the Trade of India* for 1937-38 that the output of the iron and steel industry in 1937-38 reached double the figure for 1929-30.

The Tariff Board found that no protective duties were required by the following articles: rails and fishplates, structurals (tested) and plates (tested) of British manufacture, semi-finished steel and steel sleepers. In the case of rails and fishplates the Tariff Board considered that the best means of assisting the industry was to ensure that the requirements of Indian railways were purchased in India up to the total capacity of the Indian industry at the fair selling prices estimated by the Tariff Board. Excepting the articles mentioned, which required no protective duty, the Board recommended specific duties on imported steel products at rates varying from Rs. 10 to Rs. 43 per ton. The present duties are preferential

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like the old duties. The Tariff Board received no complaints regarding the working of the preferential or differential system of duties. As in the old scheme, in the new scheme of protection duties are so calculated as to give the British manufacturer a definite advantage as compared with the Continental manufacturer, consistently with the interests of the Indian industry. As an example, bars (tested) of British manufacture pay a duty of Rs. 10 per ton and bars (untested), not of British manufacture, a duty of Rs. 39 per ton.

The new scheme of protection will continue in force till 31st March, 1941.

The need for heavy protection against Continental steel arises from the low prices at which it would otherwise be sold. Continental steel, which competes with the products of the Indian industry, is sold through an international organisation which, in fixing its prices, takes account of the local conditions of each market, and not necessarily of the expenses of production. Thus Continental steel may be sold in India at prices below cost of production. It is for this reason that the Tariff Board regarded the measure of protection which it proposed "as in the nature of an anti-dumping provision rather than as a measure of substantive protection."⁵

The question naturally arises whether protection would continue indefinitely. One of the conditions for the grant of protection laid down by the Indian Fiscal Commission (as we have seen) is that the industry should be eventually able to face world competition without protection. Will the Indian steel industry be able to dispense with protection eventually? The question was answered in the affirmative by the Tariff Board in 1923. The Tariff Board described India's natural advantages in the production of steel and expressed its belief that "it will not be long before the initial difficulties are overcome, and steel is produced at a cost low enough to enable it to face outside competition in India without protection" (para 28).

The Tariff Board in 1934 remained of the same opinion. It was satisfied that if full economic prices, including all commercial

⁵ Para 58 of the Report of the Tariff Board on the Steel Industry (1934).

charges, were quoted for Continental steel sold in India, the Indian industry could dispense with protection (para 192). As compared with France, Belgium and Luxemburg, India enjoys an advantage of Rs. 8 per ton in the production of pig iron. These countries, however, have an advantage over India in making steel from pig iron, which is due to the employment of the basic Bessemer process. This process is inapplicable in India on account of the low phosphorous content of Indian pig iron, but the advantage of the Continent does not exceed Rs. 5 per ton, so that the low cost of our pig iron may be set off against the economies arising from the use of the basic Bessemer process on the Continent, India, then, is under no handicap as compared with Continental countries in the manufacture of steel. But Continental competition is not fair. The Tariff Board hopes that if Continental prices rise to a more economical level, the Indian industry "will, within the next seven years, substantially approach the stage of being able to dispense with protection" (para 63).

This is a consoling thought. It is not improbable that at the end of the second period of protection we shall again discover that Continental prices are uneconomical. At the end of each successive period of protection our industry will probably continue to "substantially approach the stage of being able to dispense with protection" without being actually able to dispense with it.

The steel industry is of national importance and it deserves protection on this ground. And protection has come to stay.

ROOM FOR ANOTHER STEEL WORKS

The consumption of protected steel in 1929-30 was 1,078,000 tons (of which protected imports amounted to 558,000 tons), and the Tariff Board took this figure as representing India's normal demand for protected steel. Tata's maximum output was estimated at 650,000 tons, which left over 400,000 tons as the extent of the protected market available for a second steel works. "Without being rash enough to prophesy," wrote the Tariff Board, "we may reasonably hold this view that there is room for another steel works, and that the success of the Tata Company should be

sufficient to encourage the establishment of another.”⁶ A contrary view is taken in an article entitled “*Future of Indian Iron and Steel Industry*” in the “*Capital*” (*Indian Industries, Trade and Transport Supplement*) for December, 1934. It is admitted that a considerable amount of extra production is available for manufacturers, but it is maintained that difficulties in regard to commercial distribution are insuperable. The future development of the steel industry and the growth of other big steel works depend on the ability of the industry to economically distribute its output—very heavy reduction of railway rates will be necessary in order to enable steel products to meet competition in the most distant parts of the country.

But there is plenty of room for small works rolling from billets or scraps and confining themselves to a narrow range of products. Such small works are now springing up all over the country. There are two or three in Cawnpore, and others are working at Hathras, Agra, Ghaziabad, Allahabad, Lahore, Bombay, Benares, Calcutta and Negapatam.

LABOUR AT JAMSHEDPUR

The Tariff Board was satisfied with the arrangements made by the Tata Company for the welfare of labour. Jamshedpur possesses an up-to-date hospital, a Technical Institute, an Apprentice School, a High School, two Middle English Schools and 32 Primary Schools. A welfare Department was organised in 1929.*

⁶ Report, 1934, p. 13.

* “Space does not permit here to assess adequately the infinite attention, care and forethought which have gone into the planning of the beautiful garden town of Jamshedpur and its environment where there are no slums, “busti” and no plague-spots such as mar many industrial towns of the West and the older towns of India. And what is more, the Steel Company has assumed the entire responsibility from the very beginning for proper administration of all its civic functions and obligations with courage and determination. Housing, health, sanitation, medical relief, education, recreation and social welfare on modern scientific lines all come in for a due measure of generous attention. Inside the Works, the adoption of an eight-hour day, the provision of liberal service rules, production bonus, provident fund benefits, safeguards against accidents, establishment of canteens and maintenance of proper working conditions have contributed materially to reduction of industrial fatigue, accidents and illness, and to promotion of general improvement in morale and efficiency. Thus has the tempo of modern industrialism in India been set by the Tata Steel Works.” (*Capital. Trade and Industries Supplement*, 1933, p. 50.)

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In January, 1929, a scheme was introduced for granting maternity benefits to women workers; compensation for injuries received in the works is granted by the Company on a more generous scale than provided for in the Workmen's Compensation Act. Jamshednagar also possesses 25 Co-operative Credit Societies. First aid arrangements are adequate.

Since the grant of protection the Company has been steadily pursuing a policy of Indianisation: While considerable economy has been effected, efficiency has been maintained.

The number of employees on the Company's pay roll is about 24,000.

THE COTTON MILL INDUSTRY

In the pre-War year 1913-14, the imports of foreign piece goods into India amounted to 3,197 million yards, of which 3,104 million yards, or 97 per cent represented British imports. The heavy decline in imports during the War and in the years immediately following the War, and the revival of trade in subsequent years are shown by the following statement:—

IMPORTS OF COTTON PIECE GOODS INTO INDIA IN MILLION YARDS

	From United Kingdom	From Japan	Total (including other countries)
1913-14 ..	3,104	9	3,197
Average 1909-10 to 1913-14	2,563	3	2,631
Average 1914-15 to 1918-19	1,702	97	1,840
Average 1919-20 to 1923-24	1,199	113	1,351
1924-25 ..	1,613	155	1,823
1925-26 ..	1,286	216	1,563
1926-27 ..	1,466	243	1,787
1927-28 ..	1,541	321	1,973

It will be seen that imports from the United Kingdom in 1927-28 were a little less than half of imports in 1913-14. The steady increase in imports from Japan will also be noted.

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Japanese imports, however, are small in amount. A far more formidable rival of Lancashire is the Indian cotton mill industry.

The progress of the Indian cotton industry since 1898-99 is shown by the following statement:—

PROGRESS OF THE COTTON MILL INDUSTRY

Year ending June 30.	Number of mills working	Number of spindles	Number of looms	Number of spindles to looms
1898-99 ..	167	4,549,791	38,155	119
1912-13 ..	236	6,320,028	92,487	68
Year ending August 31.				
1917-18 ..	249	6,562,637	115,818	56
1920-21 ..	245	6,845,824	123,544	55
1924-25 ..	275	8,093,801	148,612	55
1931-32 ..	317	8,908,330	173,551	51

PRODUCTION

Year ending 31st March.	Mill produc- tion of yarn in million lbs.	Mill produc- tion of cloth in million lbs.	Exports of yarn in million lbs.	Percentage of exports of yarn to total production.	Exports of cloth in million yards.
1899-1900 ..	514	102	244	47·4	112
1913-14 ..	683	274	207	30·3	130
Year ending 31st August					
1918-19 ..	615	349	73	11·7	187
1921-22 ..	693	403	88	12·6	187
1925-26 ..	686	465	32	4·7	165
1926-27 ..	807	538	42	5·2	197
1927-28 ..	808	567	25	3·1	168
1931-32 ..	966	672	22	2·3	105

It will be seen that the industry had made considerable progress before the War. This is shown particularly by the increase in the number of looms in 1912-13 as compared with

1898-99. At the beginning of the pre-War period (1898-99 to 1912-13), the industry was essentially a spinning industry (a little less than half of the total yarn produced was exported). In 1912-13 the number of spindles to looms had fallen from 119 to 63, while the production of cloth increased from 102 million lbs. in 1899-1900 to 274 million lbs. in 1913-14.

The imports of yarn from 1899-1900 to the outbreak of the War remained fairly constant. The bulk of the imports came from the United Kingdom, the proportion of imports from that country to total imports in 1913-14 being 86 per cent.

The imports of piece goods rapidly increased in the two or three years preceding the War, and amounted to 3,197 million yards in 1913-14. The proportion of Indian mill production to imports increased steadily from 19 per cent in 1899-1900 to 36 per cent in 1913-14.

During the War-period (1914-15 to 1918-19) the number of mills as well as the number of spindles practically remained stationary but the number of looms increased by 25 per cent. The exports of yarn, after rising to 178 million lbs. in 1916-17 fell to 73 million lbs. in 1918-19. This was chiefly due to the competition of Chinese and Japanese yarn in the Chinese market. But a contributing cause was the neglect of the foreign market owing to the large profits which could be made locally.

The three years immediately following the close of the War were a period of great prosperity for the mill industry. All mills were working to their full capacity and there was a marked increase in the production of yarn and cloth. The capital invested in the industry almost doubled between 1917-18 and 1921-22, the figures being 20'84 and 40'98 crores of rupees respectively. High profits were earned in Bombay and elsewhere. The percentage of dividends to paid-up capital in the case of Bombay mills was 40'1, 35'2 and 30'0 in 1919, 1920 and 1921 respectively. The boom was followed by the inevitable depression. Stocks of yarn as well as cloth increased, and the attempt to force down wages led to strikes. The net profit fell from 388 lakhs in 1922 to 33 lakhs in 1923 and became a loss of 92 lakhs in 1924 and 134 lakhs in

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1925. Of 59 mills in Bombay for which information is available, 43 worked at a loss in 1925.

The lowest point of the depression was reached in Ahmedabad in 1923, in which year there was a strike of over 2 months' duration in that place. On the whole Ahmedabad mills fared somewhat better during the period of depression than the Bombay mills. In other parts of India conditions approximated more closely to those in Ahmedabad than to those in Bombay.

A demand for protection was made by the industry in 1926. An enquiry was made by the Tariff Board, and by a majority the Board recommended an increase in the existing 11 per cent duty on all cotton manufactures other than yarn, and the grant of a bounty on spinning yarn of counts 32s and above. Both proposals were rejected by the Government.

It was, however, established by the Tariff Board that on account of inferior labour conditions in Japan, there was an element of unfairness in Japanese competition, and that the stabilisation of exchange at 1s. 6d. undoubtedly imposed a handicap on the Indian industry.

The history of the cotton mill industry since 1930 is eventful. The Cotton Textile Industry (Protection) Act of 1930 granted protection to the industry, which was extended in 1933. A British Textile Mission, representing the Lancashire cotton industry, visited India in 1933, and the Bombay Mill-owners' Association concluded an agreement with Lancashire, which is known as the Mody-Lees Agreement. In January, 1934, a Trade Agreement was concluded with Japan.

These years have seen a rapid expansion of the mill production of cloth. The cotton mill industry has materially benefited by the heavy protection granted to it, and by the swadeshi movement, which assumed the form of a boycott of foreign cloth in 1930-32. The mill production of cloth in certain years is shown below:—

INDIA BEFORE AND SINCE THE CRISIS

Year ending 31st March.

Cloth made in Indian
Mills, in million yards.

1900-01	..	..	..	..	422
1913-14	..	..	..	..	1,164
1917-18	..	..	..	..	1,614
1921-22	..	..	..	..	1,732
1928-29	..	..	..	..	1,893
1929-30	..	..	..	..	2,419
1931-32	..	..	..	..	2,990
1932-33	..	..	..	..	3,170
1936-37	..	..	..	..	3,572
1937-38	..	..	..	..	4,084

The imports of cloth amounted to 1,225 million yards in 1932-33, 796 million yards in 1933-34 and 591 million yards in 1937-38. Taking the production of the hand-loom industry to be about 1,500 million yards, the total consumption of cotton cloth in India at the present time may be estimated at about 6,000 million yards, of which about one-tenth is met by imports. India is practically self-sufficient in regard to cotton goods, and can easily dispense with imports from Lancashire.

The chief points of the Mody-Lees Agreement of 1933 were the following:

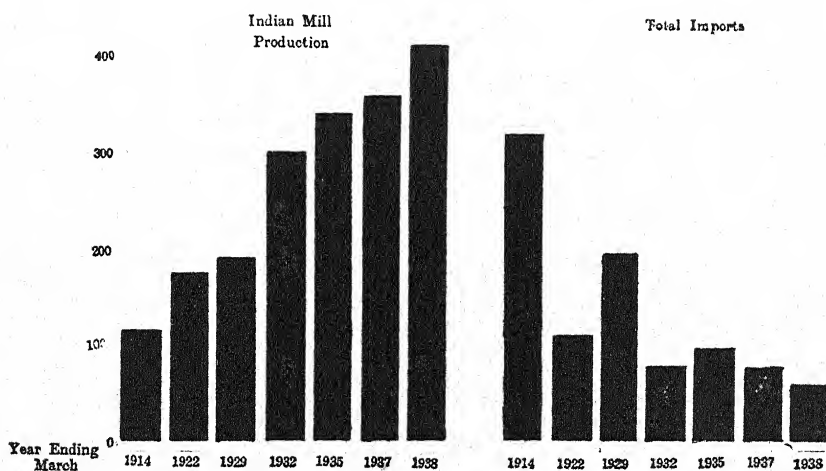
(a) When it becomes possible for the Government of India to remove the general surcharge on all imports imposed in October, 1931, the Indian side will not make fresh proposals with regard to duties on British cloth.

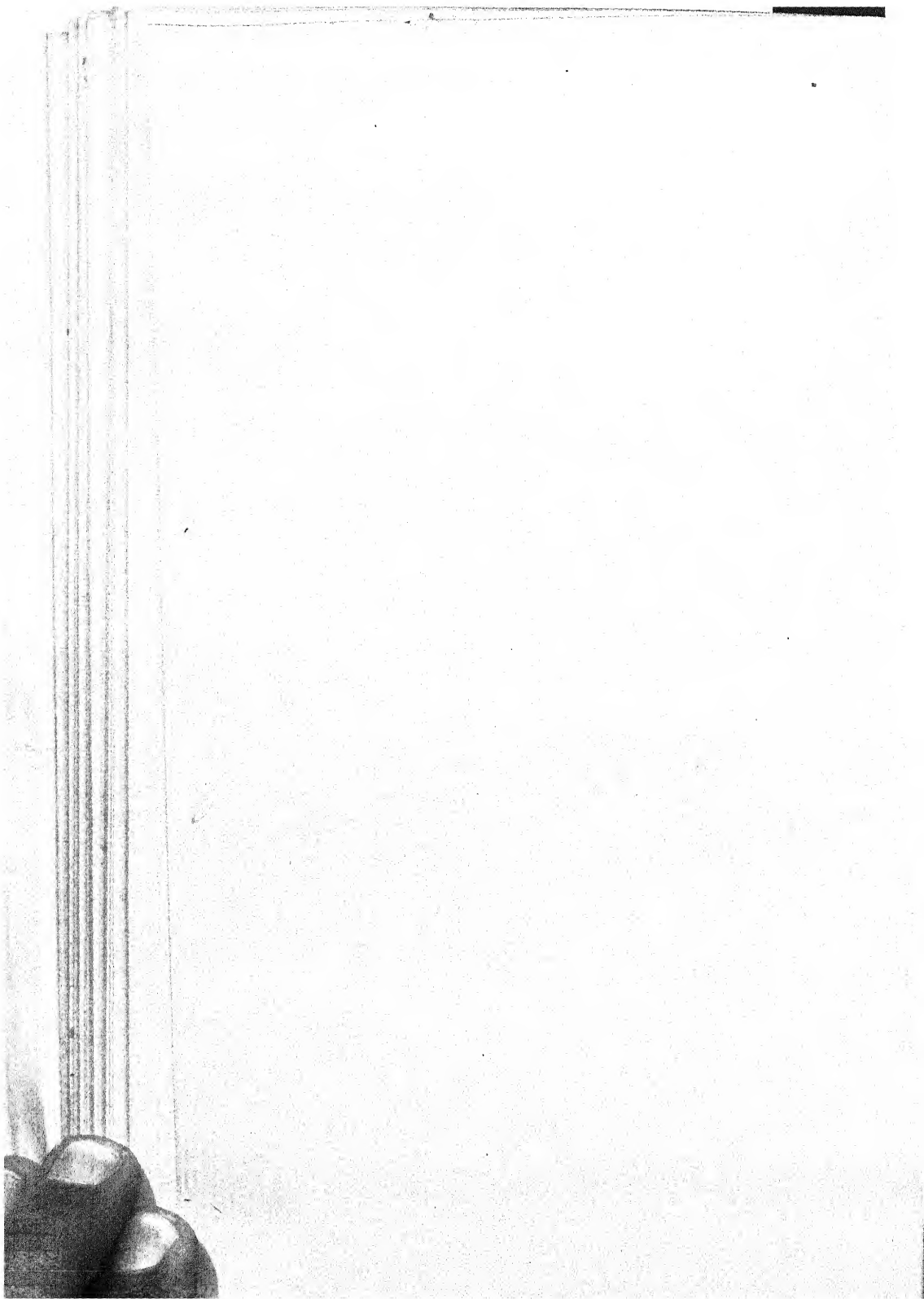
(b) Further efforts will be made to popularise and promote the use of Indian cotton in Lancashire.

The salient features of the Indo-Japanese Trade Agreement were the following:

1. The import duty of 75 per cent *ad valorem* or 6 3/4 annas per lb. on plain grey goods imported from Japan was reduced to 50 per cent or 5 1/4 annas per lb., and on other cotton piece goods from 75 per cent *ad valorem* to 50 per cent *ad valorem*.

CHART No. 14 COTTON CLOTH.





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2. Imports of Japanese cotton goods were linked with Japan's purchases of Indian cotton:

(a) Imports of Japanese cotton goods were in no case to exceed 400 million yards. This was Japan's fixed quota.

(b) For 1 million bales of Indian raw cotton purchased by Japan in a Cotton Year (beginning 1st January) Japan might send us 325 million yards of cotton piece goods in the corresponding Piece-goods Year (beginning 1st April). This was the basic quota of Japanese piece goods.

(c) Should Japan buy less than 1 million bales of Indian cotton in any Cotton Year, the quota of Japanese piece goods for the corresponding Piece-goods Year was to be determined by reducing the basic quota at the rate of 2 million yards of cloth for every 10,000 bales of deficit.

(d) In case Japan's purchases of our raw cotton exceeded 1 million bales, Japan's quota was to be determined by increasing the basic quota at the rate of $1\frac{1}{2}$ million yards for every additional 10,000 bales, provided that the quota shall not exceed 400 million yards.

(e) In respect of both cotton piece goods and raw cotton, re-exported quantity was to be deducted from the imported quantity.

A new trade agreement was concluded with Japan in April 1937. Burma is excluded from its scope. Japan's minimum takings of raw cotton are the same as before, 1 million bales but the quota of Japanese piece-goods has been reduced from 325 million to 283 million yards (the difference of 42 million yards represents the Burmese quota). In the event of Japan importing one and a half million bales of raw cotton from India, she is allowed to increase her exports of piece-goods to India to 358 million yards, which is 42 million yards less than the previous maximum.

The progress made by cotton mills in recent years is, from several points of view, truly remarkable. Sir H. P. Mody says: "Types of cloth are being produced in the Indian mills to-day which are astonishing in their variety and which compare quite favourably with those produced anywhere else. Considerable progress has still to be made in the production of the finest classes of goods. But what has been achieved in the last few years would

appear to warrant the conclusion that, within a measurable distance of time, every class of consumer will be satisfactorily catered for by the indigenous industry" (*Capital*, Jubilee Number, 1938. P. 99).

The Rt. Hon'ble Tom Shaw, who came to India as the leader of the Delegation of Experts praised the technical equipment of the mills: "I venture to say that none of the delegates thought that technical development had gone so far as it has done in India."

In regard to wages, Sir H. P. Mody says: "Nothing should please a right-minded employer more than to be able to afford wages which may be regarded as adequate, and which would enable the worker to maintain a reasonable standard of life. There are, however, certain hard realities which have to be faced. In computing what should be considered as a decent scale of wages, regard had to be paid to the capacity of the industry concerned to bear the burden. Also the general standard of life in the country and the scale of earnings of classes from which the workers in the factory are drawn cannot be ignored. It is interesting to note, for instance, that in some of the provinces, a village school teacher gets less than Rs. 6 per month."

However the increased profits earned by the industry justify labour's demand for higher wages. The Bombay Government appointed an enquiry committee into textile wages and in the interim report issued by the Committee in Feb. 1938 an average increase of 12 per cent in the wages of the cotton mill workers of the Bombay Presidency was recommended. The mill owners accepted the recommendation 'though not without some demur'. In Cawnpore the findings of the U. P. labour enquiry committee were more or less rejected by the employers and a general strike occurred in May 1938. In the Central Provinces the Government recommendations based on the enquiry committee's report in that province, have not been accepted by the workers.

The future of the cotton mill industry is bright. The recovery in demand and the weakening of Japanese competition have assisted the progress of the industry during the last two or three years. The progress will continue if efforts to lower the cost of production through rationalisation of methods of production are not relaxed.

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It is hoped that the mistake made in earlier booms of distributing large profits in the shape of high dividends and bonuses will not be repeated. Prudent financial re-arrangement which builds up adequate reserves for a period of depression, is essential for continued progress, and also for meeting the demands of labour for higher wages.

3) THE SUGAR INDUSTRY

The Sugar Industry Protection Act was passed in 1932. Since then the progress of the industry has been remarkable. In the year 1932 the total number of sugar factories in India was 32 and the total production of sugar was 478,000 tons. In 1937-38 the number of factories had increased to 136 (not including 2 in Burma) and total production of sugar amounted to no less than 1,072,000 tons. The imports of Java Sugar in 1928-29 amounted to 937,000 tons valued at Rs. 16 crores; the figures for 1937-38 are 12,977 tons valued at Rs. 17 lakhs. The imports are insignificant.

Of the one million tons of sugar produced in India in 1937-38, 125,000 tons represent khandsari, 16,500 tons sugar refined from gur and the rest 930,700 tons cane factory production. In 1933-34, 200,000 tons of khandsari were produced and over 61,000 tons of sugar were obtained by refining gur. Khandsari is an inefficient method of producing crystalline sugar of comparatively poor quality by boiling sugarcane in open pans. The importance of khandsari and gur refining has declined with the growth of cane factory production.

The distribution of sugar factories in India in 1937-38 was as shown below:

					Number.
U. P.	..	..	..	..	65
Bihar	..	..	..	..	33
Punjab	..	..	..	..	3
Madras	..	..	..	..	8
Bombay	..	..	..	..	7
Bengal	..	..	..	..	6
Orissa	..	..	..	..	2
Indian States	..	..	..	..	9
Total for India	..	..	..	..	136
Burma	..	..	..	..	2

Of the total quantity of sugar produced in India U. P. accounts for 57 per cent and Bihar 24 per cent. The combined share of the Punjab and Sind is 1'3 per cent.

The estimated consumption per head of the population in India in 1937-38 was sugar 6'7 lbs., gur 26'8 lbs., total 33'5 lbs. This may be compared with the consumption of sugar per head in other countries: Japan 24'7 lbs., U. S. A. 94'8 lbs., and Great Britain 105'4 lbs.

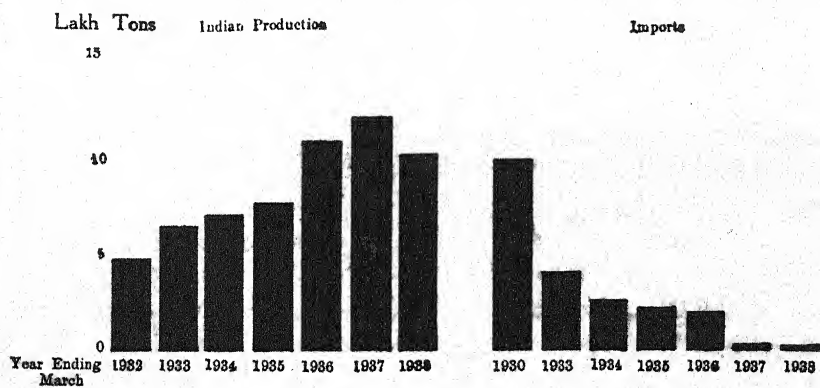
The growth of the sugar industry has led to a considerable increase in the area under sugarcane and the production of gur. In 1931-32 the total area under sugarcane was a little over 3 million acres and the quantity of gur produced over 4 million tons; in 1936-37 acreage had increased to 4,440,000 and yield of gur to 6,489,000 tons. Of special significance is the increase in the area under improved varieties of cane, from over 1 million acres in 1931-32 to 3,600,000 acres in 1937-38. The acreage is tending to decline. The figure for 1938-39 is 3,355,000 acres under sugarcane. There were definite signs of over-production of gur.

The percentage of cane used in cane-crushing factories was 16'0 in 1936-37 and 1'1 in refineries. 64'9 per cent of the cane was used for gur manufacture, and 18 per cent was used for other purposes including khandsari, chewing and sets for planting etc. A comparatively small proportion of the cane is used for sugar manufacture.

The estimated average price of cane per maund in 1937-38 was Re. 0-5-3, the estimated amount paid for cane by factories to cultivators Rs. 9 crores, the number of unskilled workers employed 100,000 and wages paid to unskilled workers Rs. 60 lakhs. It is assumed that an average factory employs about 600 workers and that the wage paid is 8 as. a day on an average working period of 120 days (*Indian Sugar Industry* by M. P. Gandhi, 1938. P. lxx).

In the two most important sugar producing provinces the irreducible minimum price of sugarcane was fixed for the entire season at Re. 0-5-3 per maund for cane delivered at the gate of the factory.

CHART No. 15 : SUGAR.



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The Government of India's revenue from the import duty on sugar declined from about Rs. 7 crores in 1932-33 to Rs. 25 1/3 lakhs in 1937-38. The yield of the excise duty in 1937-38 was Rs. 3 1/3 crores. The development of the sugar industry has meant a loss of about 4 crores to the Central revenues.

The following statement shows the value of sugar machinery imported from abroad:

TOTAL VALUE OF SUGAR MACHINERY IMPORTED, FROM

			U.K. Lakhs.	Other countries Lakhs.	Total value Lakhs.
1932-33	..	..	91	62	153
1933-34	..	..	196	140	336
1934-35	..	..	74	32	106
1935-36	..	..	50	17	66
1936-37	..	..	68	27	95
1937-38	..	..	44	26	70
TOTAL 1932-33 to 1937-38			5,23	3,04	8,26

The expansion of the sugar industry has practically ceased, for self-sufficiency has been achieved, and further expansion would lead to over-production, cut-throat competition and the fall of prices. It is stated that the year 1937-38 was a critical year for the industry owing to 'internal fierce competition amongst the mills'. What is needed now is 'consolidation on a satisfactory, sound and permanent basis.' Attention has been drawn by Mr. M. P. Gandhi to the major problems confronting the industry. The most important among them are the following:

1. Prevention of over-production of sugar either by restriction on establishment of new factories or on extensions to the plants of existing factories or by assignment of quotas amongst all factories in the country, whenever it becomes necessary.
2. Evolution of an efficient and scientific common sales organisation which would undertake *direct* sales and distribution of sugar in appropriate markets, avoiding crisis-crossing of the traffic and thus economising in freight charges.

3. Improvement of standards of sugar and its keeping qualities.
4. Improvement of the quality of cane and the total yield per acre and eradication of pests of cane.
5. Reduction of the cost of production of cane.

Attempt is being made to create a Single Sugar Selling Organisation with the object of raising the price of sugar. The price of sugar in India is no longer governed by that of imported sugar; it is determined by internal competition. "Indian sugar," says Mr. M. P. Gandhi (Secretary of the Indian Sugar Mills Association) "can easily sell at about Rs. 9-12 per maund at Calcutta in competition with Java sugar which sells at Rs. 10-4 per maund. But actually it sells at about Rs. 8-8 at Calcutta, and thus unnecessarily wastes a considerable amount of protection."⁸

How can this 'waste of protection' be avoided? Naturally by charging 'the maximum price which market conditions permit.'⁹ There is no doubt that combination among producers and a unified selling organization will make it possible to raise the price of sugar. But it is an altogether wrong point of view. The industry does not exist for sugar producers alone. The price of Java sugar includes the present heavy duty. No justification exists for the heavy protection which the industry enjoys if the development of the industry does not eventually lower the price of sugar. No one objects to scientific and economic distribution of sugar, but if the result is to raise the price of sugar to the consumer, it would be the duty of the Government to lower the import duty.

THE MATCH INDUSTRY

The growth of the match industry in India will be remembered as a classical example of the beneficial effects of protection under favourable conditions. Before the year 1921 there was only a single match factory, (the Gujrat Islam Match Factory of Ahmedabad) which, in spite of severe foreign competition, could

⁸ Pamphlet entitled *Single Sugar Selling Organisation* by Mr. M. P. Gandhi, 1934, p. 15.

⁹ *Ibid.*, p. 14.

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make a small profit. The imports of matches in 1919-20 amounted to 15 million gross boxes. In March, 1921, the duty on imported matches, which had already been raised from 5 per cent *ad valorem* to $7\frac{1}{2}$ per cent in March, 1916, was fixed at 12 annas per gross, and in March, 1922, it was raised to Rs. 1-8-0 per gross. All these changes in duty were determined by fiscal necessity. The increase in duty in 1921 and 1922 took place at a time when the Government of India were faced with a succession of budget deficits.

"With the imposition of a duty on imported matches," says the Report of the Tariff Board on the match industry, "varying between 100 and 200 per cent *ad valorem*, the position changed rapidly."*

The increased duty was leviable on finished matches, not on undipped splints and veneers, and arrangements were made to import the latter from Japan. The manufacture of matches from imported veneers and splints proved very profitable. From 1st March, 1924, specific duties were imposed by Government on veneers and splints for the sake of revenue. But in the meantime Indian manufacturers had gained some experience of match manufacture. They now imported machinery for the manufacture of splints, veneers and boxes; aspen wood, on which a 15 per cent *ad valorem* duty was levied, was imported from Japan or Sweden. An Indian match industry thus came into existence.

The Tariff Board estimated that in 1927, 27 match factories existed in India, with an outturn capacity of 500 gross a day or over, and a total capacity of about 18 millions gross annually.

The demand for matches in India is about 17 millions gross; in 1926-27 Indian production was about $10\frac{1}{2}$ million gross boxes.

With the growth of internal production imports have rapidly declined. This is shown by the following table:

* Report, p. 4.

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IMPORTS OF MATCHES (MILLIONS OF GROSS BOXES)

		Japan.	Sweden.	Total (including other countries).
1915-16	..	15'3	2'3	18'3
1919-20	..	13'9	'9	15'0
1920-21	..	10'0	2'3	12'4
1921-22	..	12'7	'9	13'7
1922-23	..	8'3	2'7	11'3
1923-24	..	5'6	5'2	11'2
1924-25	..	3'5	3'0	7'3
1925-26	..	2'3	4'8	7'9
1926-27	..	1'0	4'5	6'1
1927-28	..	'3	2'9	3'5
1928-29	..	'08	1'3	1'5

The figures given above are a striking proof of the success of the Indian industry. It will be seen that the total imports declined from over 18 million gross boxes to less than 2 millions gross. It is also seen that Japan dominated the Indian market during the War and for three or four years following its termination. The Japanese industry succumbed to Swedish competition.

The Swedish Match Company established six match factories in India between July, 1924, and September, 1926, of which four were working in 1926-27. The Tariff Board estimated the approximate capacity of the factories belonging to, or under the control of, the Swedish Match Company at about 6 millions gross a year.

Indian manufacturers feared that the object of the Swedish Match Company in establishing factories in India was to destroy Indian competition and to capture the Indian market. The Tariff Board admitted that "the resources of the Swedish Match Company are sufficient, if it so desired, to crush, for a time at least all competition from Indian firms, and capture for itself the whole of the Indian market."^{*}

Mr. Iver Kreuger, however, on behalf of the Swedish Match Company denied that the object of the Company was to establish a monopoly—it only wished "to compete on equal terms with its

^{*} Report, p. 90.

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competitors."† The Tariff Board did not find anything in the activities of the Company which called for Government intervention; on the other hand, the Board regarded the existence of the Company's factories as of "distinct economic value to the country," because of the high standard of quality at the Company's factories, and of the training afforded to Indians in these factories in improved methods of match manufacture.

It deserves to be noted that in consequence of the growth of production, price in India is determined by internal competition. In the beginning matches made in Indian factories were of inferior quality but gradually the quality improved, and after making exhaustive tests, particularly in the monsoon months, the Tariff Board were able to say that "the matches manufactured of Indian wood in the most up-to-date factories, though less finished in appearance than imported matches," were, "for practical purposes little inferior," and that several manufacturers in India produced matches of superior quality which could not be distinguished from imported Swedish matches.*

On the recommendation of the Tariff Board the duty of Rs. 1-8 per gross was declared a protective duty. No definite period has been fixed after which protection will be withdrawn.

The following table shows the imports of matches in recent years:

IMPORTS OF MATCHES

		From Japan 1,000 gross.	From Sweden 1,000 gross.	Total 1,000 gross
1929-30	..	.. 52	886	974
1930-31	..	.. 20	360	397
1931-32	..	.. ..	101	105
1932-33	..	.. 11	43	57
1933-34	..	.. 12	62	79
1934-35	..	.. 15	19	54
1937-38	..	.. ..	..	1100

The imports are negligible, and Indian production is sufficient to meet the demand. In 1935-36 production amounted to 24.4 million gross boxes of safety matches.

† Mr. Iver Kreuger's Memorandum.

* Report, pp. 6 and 64.

INDIA BEFORE AND SINCE THE CRISIS

5' CEMENT

One of the Indian industries which owe their development to the War is the manufacture of Portland cement. In 1914 a small quantity of cement was produced at Madras—945 tons, while imports in 1914-15 amounted to 165,723 tons,. In the calendar year 1927 there were ten Indian companies manufacturing cement with an actual output of 477,640 tons, while imports amounted to 117,695 tons. The industry is of great national importance, as was seen during the War.

The cement industry in India enjoys many natural advantages. Limestone of excellent quality exists in many parts of the country. The longest distance over which limestone has to be conveyed is 32 miles. Suitable clay is found close to the works, and there are ample supplies of limestone and clay for a long period of years. Gypsum, the only other raw material needed, is also produced in India. The supplies of labour are adequate and the process of cement manufacture does not necessitate the employment of highly skilled workers from abroad. In respect of fuel, however, the cement industry is subject to a serious disadvantage. With one exception, all the companies are situated at long distances from the coalfields, and the freight on coal is a very serious item in the cost of production.

The Indian market for Portland cement is a large and growing one. Between 1900 and 1910 the imports increased from 43,000 tons to 135,000 tons, and in the last two pre-War years, when home production was negligible, cement was being imported at a rate exceeding 140,000 tons a year. Indian production and imports between 1914 and 1932 were as follows:

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CEMENT

		Indian production, 1,000 tons.	Imports, 1,000 tons.	Total consumption: 1,000 tons.
1914	..	.. '9	166	167
1918	..	.. 84	27	111
1920	..	.. 91	119	210
1925	..	.. 361	68	429
1929	..	.. 560	75	635
1930	..	.. 560	68	628
1931	..	.. 588	62	650
1932	..	.. 582	59	641
1937-38	..	.. ...	32	...

Imports fell off heavily during the war, and in 1916 and 1918 consumption was substantially below the pre-War level. A rapid increase in consumption began after the war, and in 1925 consumption was more than $2\frac{1}{2}$ times that for 1920, while production had increased more than five times. In the Calendar year 1932 a little more than 90 per cent of the total demand was met by Indian factories, leaving less than 10 per cent for imports.

The principal market for cement in India is in the ports, and especially in Calcutta and Bombay. This gives an advantage to the importer of cement over the Indian manufacturer, for with five exceptions, no Indian factory is within 600 miles of a port, and 4 out of the 5 are 1,000 miles and upwards from the coal fields. There are no cement works within 350 miles of Calcutta and none within 250 miles of Bombay. Indian manufacturers enjoy a great natural advantage in respect of the up-country market, but this is not important.

During the War Indian cement factories (3 in number) were working under Government control, and the great bulk of their output was taken by the Indian Munitions Board at a price not exceeding Rs. 55 a ton *ex-works*. Control ended in the middle of 1919 and the companies were able to sell their product at very remunerative prices, which were, however, much below the price of British cement. In 1922 the price of Indian cement began to fall, and it fell still more heavily in 1923—25 when the production of the new factories came on the market. The fall in price was

INDIA BEFORE AND SINCE THE CRISIS

entirely due to production having exceeded consumption. An application for protection was made to the Tariff Board which recommended the grant of a bounty, under certain conditions, on the cement conveyed to the ports. The Government of India refused to take any action on the ground that there were objections of principle to conditional legislation, and that they saw no justification for Government intervention.

Prices have been stabilised by agreement among producers. In 1926 the Indian Cement Manufacturers' Association was formed and shortly after this the Concrete Association of India. In 1930 the Cement Marketing Company of India, Ltd., was established to control the output of the Indian factories on a quota basis, and to save waste on account of excessive railway freights by a rational distribution of orders.

The production of cement in 1937-38 was double that in 1932-33. Both the output and the price are controlled by a merger which was effected in 1936. Since then the cement industry is working more or less as a single organisation. India has attained self-sufficiency in regard to cement and the imports have dwindled to a low figure. In the year 1935-36 India's output of Portland cement amounted to 891,000 tons. ✓

PAPER

The Government decided to assist the bamboo and the paper pulp industry in 1925 by the imposition until March 31, 1932, of a specific protective duty at the rate of 1 anna per lb. on all printing paper (with certain exceptions) which contained less than 65 per cent of mechanical pulp and on all writing paper.

The grant of protection to the Indian paper industry marked a new phase in the development of the industry. Paper has been manufactured in Indian mills for about 60 years now. After the War the industry suffered much on account of dumping by foreign manufacturers of paper, and the rise in exchange added to the difficulties against which Indian manufacturers had to contend. Competition from Scandinavia and Germany before the War made all Indian companies loss, but they made considerable profits during

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the War. After the War intense foreign competition started, assisted as it was by depreciated currencies, with the result that the Indian mills were undersold. Germany and England were chiefly responsible for dumping paper into India. The Scandinavian mills cannot afford to dump, as the domestic consumption of Norway and Sweden is small, and no manufacturer can dump 80 or 90 per cent of his output.

In the year 1926, 9 paper mills were working in India with a total output of 32,144 tons. The Tariff Board estimated the output of Indian mills at 33,000 tons a year, and expected, as the result of the expansion of the industry, that the output could be raised to 43,000 tons annually.

In the year 1931 there were ten paper mills working in India with an authorised capital of 1,21 lakhs, and a total output of 41,000 tons. The output increased to 48,100 tons in 1935-36. The imports of paper (excluding pasteboard) are shown below:—

CWTS			
Total of Paper.	1931-32.	1932-33.	1937-38.
Protected . . .	247,877	229,812	295,605
Not protected	1,667,278	1,990,194	2,703,902
<hr/>			
Total cwts.	1,915,155	2,220,006	2,999,507
Total tons	95,758	111,000	149,975

Including Indian production of 48,000 tons, the total consumption of paper in India at the present time is over 200,000 tons.

It is impossible to make newsprint in India. Mechanical pulp has never been made from either grass or bamboo, the raw materials used in India. We cannot have cheap newspapers unless we continue to use (imported) papers containing a high proportion of mechanical wood pulp.

Old newspapers come almost entirely from the United Kingdom and are used largely in Bombay, Sind and Burma as the cheapest kind of wrapper. No manufactured paper can compete at the prices at which old newspapers are sold.

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There are also certain kinds of papers which are not likely to be made in India: expensive rag papers; all coated paper such as art paper and special manufactures such as blue match paper and tissue paper; papers of a very superior quality; and cheap wrapping papers. Indian mills have started making pasteboard, millboard and cardboard.

The total market that Indian mills can hope to capture was estimated by the Tariff Board at about 20,000 tons.

Paper has hitherto been made in India from *sabai* grass, but grass, on account of its high cost, has no chance in competition with bamboo pulp. The future belongs to the bamboo and the paper pulp industry.

Paper made from bamboo pulp is inferior to *sabai* grass paper in strength and durability, but for the great bulk of papers consumed in India bamboo fibre is quite good enough—certainly as good as wood, and possibly better. The quantities of bamboo which are commercially available in India are enormous. Mr. Raitt is of opinion that “from bamboo, taking only that which is available under possible manufacturing conditions, Burma, Bengal and South-West India could produce ten million tons of pulp per annum—India could therefore produce pulp for the whole world.”*

India's bamboo resources are attracting the world's attention on account of the shortage of wood pulp. The rapid destruction of forests is chiefly responsible for this shortage. It is stated that in the United States forests are being destroyed four times faster than they grow; and that in Canada only 27 per cent of the original forest wealth is left, and its pulp would be exhausted in less than 30 years. Lord Rothermere, who represents probably the largest group in the world of paper-making, paper-consuming and forest-owning concerns, has declared that on account of the shortage of pulp wood, the pulp and paper industry “is within measurable distance of a crisis.”†

* Paper read to the Royal Society of Arts in 1921.

† “Capital” (Calcutta), Indian Industries and Trade Supplement, December 13, 1928, p. 74.

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The advantage of using bamboo pulp in paper-making is that its supplies are practically inexhaustible. Bamboo is annually reproductive; wood requires 60 years to grow.

We learn that two bamboo areas in Burma have been acquired by important groups in London, and others are being considered.

The supply of raw material for the Indian paper industry is secure, and we may even say that when our bamboo resources are developed, our manufacturers of paper will be in a position of advantage as compared with European manufacturers. But in certain other respects they enjoy no advantages.

The cost of chemicals in India is high. Most of the chemicals required for the manufacture of paper are now made in India, but their prices are regulated by those of imported chemicals and they usually exceed the prices paid by European mills by the full amount of the sea-freight and landing charges, and in most cases, of the customs duties as well. Another difficulty is that the chemicals have to be brought to the mills from long distances, and the transport charges are heavy. Similarly most of the mills have to pay heavy transportation charges for coal. The best coal in India is found in one locality—the RaneeGUNJ coal-field, and a paper mill which chooses to be near the sources of the raw material has to pay a heavy price for its coal. Indian labour is cheap, but when we consider the possibilities of expansion of our industry we cannot forget that the initial cost of paper mills in India is high—that of a new European mill is estimated to be three-fourths or two-thirds of the initial cost in India.

On the whole, the prospects of paper-making from bamboo pulp are hopeful. While the manufacture of paper from *sabai* grass under conditions of absolute free trade, except in the Punjab, is considered to be impossible, it is expected that if the abundant supplies of bamboo which exist in India are developed, the industry will need no further assistance for many years than what the existing protective duty gives it, and that eventually, as the cost of wood pulp increases, the industry would be able to do without protection altogether.

In 1932 protection to the paper industry was extended till 31st March, 1939. The maximum percentage of machanical

Now it has passed into Indian hands mostly!

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wood-pulp in the fibre content of printing paper which is assessable at the protective rate was increased from 65 to 70, and a duty of Rs. 45 per ton was imposed on wood-pulp. This duty was also to remain in force till 31st March, 1939.

The Tariff Board has examined the demand of the industry for the continuance of protection, but the decision of the Government is not yet known.

The progress of the industry under protection since 1932 has been satisfactory. The older paper mills are feeling the competition of newly established mills and the cost of materials has also been rising.

JUTE

The inception and development of the jute industry is due to foreign enterprise;¹¹ the industry is also largely financed with foreign capital.

The average area under jute in the period 1895-96 to 1899-1900 was 2 million acres and the average yield of jute 5—8 million bales of 400 lbs. each. In the War period (1915-16 to 1919-20), the area increased to 2.6 million acres, and the yield to 8 million bales. The exports of raw jute declined during the war but those of jute manufactures increased from about 20 crores of rupees (pre-War average) to 45 crores (War average).

¹¹ The following passage, taken from the *Imperial Gazetteer of India*, Vol. III, relates the early history of jute:

"Jute fibre was first experimented with by Europeans in 1820, the result being so unfavourable that brokers were for some years subsequently required to give a guarantee that sales of fibre effected by them were free from adulteration with jute. One of the earliest commercial references to the fibre occurs in the Customs returns of 1828. In that year 364 cwts of raw fibre valued at Rs. 620 were exported to Europe. The manufacture of gunny bags and cloth was at that time entirely in the hands of the Bengal peasant weavers, but the traffic could not have been very extensive. In 1832 an enterprising Dundee manufacturer experimented once more with the fibre and was able to show that it might be used as a substitute for hemp. From that date jute gained rapidly in popular favour. It was recognised that it was capable of the most minute separation, but it is only within the last few years that this advantage has been utilised for the finer textile purposes. In time the difficulty of bleaching and dyeing the fibre disappeared; and the success of jute being thus assured, the foundation of the manufacturing enterprise of Dundee and Calcutta was laid."

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Before the slump, in 1928-29 the area under jute amounted to 3·1 million acres, and yield 9·9 million bales, while exports of raw jute in the same year were valued at 32 crores and of jute manufactures at 45·6 crores. The position during the slump is shown by the following figures:—

RAW JUTE EXPORTS, 1ST JULY TO 30TH JUNE

Year.		Lakhs Rs.	Tons.	Value per ton.
1929-30	..	26,10	805,800	324
1930-31	..	11,18	609,000	184
1931-32	..	10,85	556,000	165
1932-33	..	10,51	629,000	167
1933-34	..	10,99	759,000	145

EXPORTS OF MANUFACTURED GOODS, 1ST JULY TO 30TH JUNE

Year.		Lakhs Rs.	Tons.	Value per ton.
1929-30	..	48,69	945,000	515
1930-31	..	27,95	716,000	390
1931-32	..	21,69	662,000	343
1932-33	..	21,87	685,000	319
1933-34	..	20,11	666,000	302

The fall of prices was disastrous, and at the same time the quantity of raw jute and jute manufactures exported decreased. The income of Bengal from jute fell from 74¾ crores in 1929-30 to a little over 31 crores in 1933-34, a fall of over 58 per cent.

By an agreement which came into force on 1st August, 1932, jute mills which are members of the Jute Mills Association were working 40 hours per week with 15 per cent of their total looms sealed down. The mills outside the Association agreed to reduce their working hours to 54 per week but were permitted to operate all their machinery.

The foreign demand for jute fell on account of the general contraction of world trade and the increasing use of substitutes. France is encouraging the use of Sisal from her colonies. The cement trade has gone over to paper and paper bags are also used in the sugar trade. The Soviet Government is reported to be

experimenting with the fibres which are grown within their country as substitutes for jute.*

The curtailment of production produced two undesirable reactions. In India several new mills were erected and abroad foreign manufacturers succeeded in capturing an appreciable amount of Calcutta's trade. The restrictions on production were, therefore, withdrawn by the Association by stages between 1934 and 1937. However, in Oct. 1938 the Bengal Government was forced to issue an ordinance restricting the working hours in all jute mills in the province to 45 per week.

The Government scheme to restrict the area under raw jute came into operation with the crop of 1935. The manufacturers protested, particularly those of Dundee. How far the Government restriction scheme has been successful in achieving its object is 'debatable.' But the crop in 1936 was smaller and prices higher. "Since then the outturn has again increased and it was only the removal of manufacturing restrictions by Calcutta mills, with consequent increase in the consumption of raw jute that prevented another fall in price coming earlier than it did" (*Capital*, Jubilee Number, p. 43).

Demand for jute may increase if new uses for jute are discovered. Jute may be used for insulating materials, for roofing and for the production of sheeting for internal and external walls. Jute cloth may be used for wire-mesh in concrete structures and also in road-making. If the experiments now being conducted are successful, "it may be pardonable to conjure up visions of the

* "There has been during the year the usual crop of reports regarding the discovery of substitutes for jute. We have been told that a new method has been discovered for dealing with Sisal so that bags can be made from it of equal quality and at competitive prices with those of jute. It is also reported that, in Italy, a fibre has been extracted from the broom plant which has the prospects of competing successfully with Bengal's product. A factory has been brought into operation in New Zealand for the manufacture of woolpacks from New Zealand flax and we are told that rock wool from Canada is to take the place of jute in the manufacture of cables and insulating sheets. Reports from Australia and the Argentine also state that the development and extension of mechanical appliances are likely to reduce the requirements of jute goods in these centres in the near future."

[*"Capital,"* December (1934), Supplement, p. 13].

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Calcutta mills working full time with all their machinery and the ryot being urged to sow more jute."¹³

In the meantime the ryot is being urged to sow less jute. The restriction is at present voluntary. Government propaganda in favour of crop restriction has been launched through the Agricultural and the Co-operative Departments, and the District and Union Boards. Reduced quotas have been fixed for each District. If voluntary crop restriction through persuasion fails, compulsory restriction through legislative action may be resorted to.

9) TEA

The price of tea (black) fell from 12 annas per lb. in March, 1928 and 1929, to about 9 annas in March, 1930. It rose to a little over 11 annas in March, 1931, but fell again in 1932. There was a rise in March, 1933, and a further substantial rise in 1934.¹⁴ The improvement was due to crop restriction. The following table shows the quantity and value of exports in certain years:

EXPORTS OF TEA

Year.			Million lbs.	Lakh Rs.
1927-28	..	..	362	32.48
1928-29	..	..	360	26.60
1929-30	..	..	377	26.01
1930-31	..	..	356	23.56
1931-32	..	..	342	19.44
1932-33	..	..	379	17.15
1933-34	..	..	318	19.85
1934-35	..	..	325	20.13
1937-38	..	..	335	24.38

It will be seen that in 1932-33, while the quantity of exports was greater than that in 1927-28, the value of exports fell by 15 1/3 crores. The only method of arresting the decline in prices

¹³ *Capital*, December, 1933, Supplement, p. 19.

¹⁴ The price fell again from As. 11-9 in March, 1934, to As. 10-6 per lb. in March, 1935; it was As. 0-10-11 in March 1938.

was restriction of production and of exports. At the suggestion of the Dutch a plan was adopted in (1932) which will remain in operation for five years, by which the principal producing countries have undertaken not to export more than a given quantity in any year, the quantity to be revised annually. The control of exports is now statutory. But it soon appeared to the Indian Tea Association that "the control of exports was not in itself the Alpha and the Omega of recovery."¹⁵ The control of exports was supplemented by the control of production. A scheme of voluntary control of production was devised and put into operation with the requisite support of 93 per cent of the producers in India. Briefly, an estate which produced 100,000 lbs. in the best year was allotted an export quota of 65,000 lbs., and was entitled to an allowance of 12,000 lbs. for consumption in India, giving a total crop of 77,000 lbs., which, under certain conditions, can be increased to 90,000 lbs.

Propaganda to increase the sale of tea or to encourage tea-drinking in India is carried on by the Indian Tea Market Expansion Board. It is estimated that the consumption of tea in India has risen from 18 million lbs. in 1902-03 to 90 million lbs. per annum at the present time. This represents a consumption per head of less than $\frac{1}{4}$ lb. in India as compared with 1 lb. per head in the United Kingdom.

The tea industry, 'taking a very long view,' is thinking of developing the American markets. It is feared that the British demand for tea will tend to decline; "There seems little reason for doubt that in fifty years' time the population of Great Britain will be considerably less than it is now, and it is therefore essential to find some market to replace that which will be lost as a result of the decline in the population of Great Britain" (*Capital Jubilee Number*, p. 105).

International tea control has been referred to above. Towards the end of the year 1937 the continuance of international

¹⁵ *Capital*, December, 1933, Supplement p. 22.

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control was agreed to by the participating countries and the scheme was extended for another period of five years from April 1938.

INDIAN FACTORIES, 1936

The following statement shows the total number of factories working during 1936 and the average daily number employed in different provinces:

			No. of factories.	No. employed.
Madras	..	..	1,584	170,800
Bombay	..	..	1,611	391,771
Sind	..	..	282	25,289
Bengal	..	..	1,667	531,235
U. P.	..	..	527	147,502
Punjab	..	..	747	63,962
Burma	..	..	985	89,230
Bihar	..	..	274	86,676
Orissa	..	..	64	3,346
C. P.	..	..	718	63,186
Assam	..	..	710	47,069
N. W. F.	..	..	27	1,149
Baluchistan	..	..	10	1,750
Ajmer-Merwara	..	..	40	13,781
Delhi	..	..	60	13,643
Bangalore and Coorg	..	..	17	1,758
TOTAL			9,323	1,652,147

The factory workers form less than one per cent of the population. This is a useful fact to remember in considering the application of Marxian socialism (socialism of the industrial proletariat) to India. Our industrial proletariat is of little significance.

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The following statement shows the classes of concerns:

	No. of concerns.	Average daily employed.
Govt. and Local Fund Factories ..	368	120,781
Textiles	650	731,027
Cotton spinning weaving and other factories	340	437,065
Jute mills	103	277,986
Engineering	744	133,434
Railway workshops	89	49,079
Minerals and metals	164	52,551
Food, Drink and Tobacco ..	3,555	249,772
Chemicals, dyes etc.	517	55,960
Paper and Printing	454	34,206
Processes relating to wood ..	435	43,327
Gins and Presses	2,254	166,391
Processes connected with skins and hides	44	7,887
Cotton ginning and baling ..	2,036	131,002
Miscellaneous	138	15,596
TOTAL	9,323	1,610,932

Industries which provide the largest employment for labour are textiles, engineering, and food, drink and tobacco.

Of the 9,323 factories working in 1936, 5,581 were perennial and 3,742 seasonal. The perennial factories employed 1,343,720 labourers and seasonal factories 308,427 labourers.

In regard to welfare work it is stated that more creches have been provided in certain provinces, a group of factories in Cawnpore has organised a club whose activities include a baby week, first-aid lectures, ambulance work, co-operative work etc.; in Madras medical facilities were provided on tea estates and in large industrial concerns and one factory fed children free of cost every day. The Factory Department in Bombay was successful in securing the formation of new co-operative credit societies and industrial societies in various factories.

A comparison of the figures of our factory employees with those of Great Britain brings out the essential difference between

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our industrial development and that of an advanced industrial country:

NUMBERS AGED 10 YEARS AND UPWARDS IN GREAT BRITAIN ENGAGED
IN THE PRINCIPAL INDUSTRY GROUPS. FIGURES IN 1,000.

	1881	1921
Total aged 10 years and over ..	22,081	34,979
Agriculture	1,593	1,307
Coal and Shale mining	437	1,305
Manufacture of Bricks, Cement, Pottery and Glass	130	214
Manufacture of Chemicals, Explosives, Paints, Oils, Rubber, etc. ..	52	269
✓ Manufacture of Metals, Machines, Imple- ments and Conveyances	927	2,491
Manufacture of Textiles	1,191	1,293
Cotton	520	621
Wool and Worsted	252	260
Silk	64	34
Flax, Hemp, Jute, Rope, Canvas and Canvas goods	85	88
Dyeing, Bleaching, Printing Furnishing	66	117

(Source: *Statistical Abstract for the United Kingdom*, 1934, pp. 100-101).

Persons aged ten years and upwards engaged in the cotton industry in Great Britain numbered 520,000 in 1881, and 621,000 in 1921 (India, 1931, 417,000). The total number of persons engaged in the textile industry in Great Britain in 1921 was 1,293,000 (India 1931, 715,000). It should not be forgotten that the population of Great Britain (45 millions in 1931) is about one-eighth of the population of India.

The most interesting figure is that of persons engaged in the manufacture of metals, machines, implements and conveyances—2,491,000 in Great Britain in 1921, or about 13 per cent of the total number of occupied persons of ages 10 years and upwards. The total number of employees in India of engineering works and of establishments in Group III, Minerals and Metals, in 1931 was

273,000. Those engaged in the manufacture of metals, machines, implements and conveyances in Great Britain exceed the total number of our factory workers.

India does not manufacture modern machines and implements. Our engineering works are mostly repair shops, or manufacture simpler parts of machinery. In an industrial country the manufacture of capital goods occupies the largest proportion of workers. It is remarkable that the level of prosperity is higher where a considerable proportion of the population is engaged in making means of transportation and other indirect goods than where an overwhelming majority of the population is producing consumable commodities. British workers do not care about producing food—the number of agricultural workers decreased from 1,593,000 in 1881 to 1,307,000 in 1921—but they have more of it in the end than 71 per cent of our population who are directly engaged in agriculture.

CHAPTER VI

COTTAGE INDUSTRIES

The heavy fall in agricultural prices and the acute distress that it has caused among the agricultural classes have turned the attention of both the people and the Government to rural reconstruction and the revival of cottage industries as a subsidiary source of income to the village people.

Mahatma Gandhi initiated the movement by founding his Village Industries Association in 1934. The headquarters of this Association are at Wardha. A Board of Administration has been formed under the Village Industries Association, which has been entrusted with important functions: of co-ordinating the policy followed in different centres, of collecting information about the existing condition of village industries and the economic and physical condition of villagers, of carrying on research work (left undefined) with the help of specialists and experts, and of discovering and creating markets for surplus village manufactures. The Board will be assisted by workers or agents who "consistently with their pre-occupation of earning their livelihood," will give their whole time to the work of the Association. Finally, a Board of Advisers has been constituted which includes, among others, Dr. Tagore, Sir P. C. Ray, and Sir C. V. Raman. The object of the Village Industries Association is to promote the economic welfare of village people, to make them 'self-reliant and self-supporting.'

The Village Industries Association has nothing to do with politics.

Probably taking their inspiration from Mahatma Gandhi the Government of India provided 113 lakhs in the budget for 1935-36 for rural reconstruction. Out of this sum 10—15 lakhs was required to place the co-operative movement on sound financial foundations; the rest of the grant was available for the economic

development and improvement of rural areas. Preference was to be given to schemes which could be quickly put into operation.

The Punjab Government provided a lakh for the same purpose. The Finance Member of the Punjab thus referred to this subject in the course of his budget speech in 1935:

“An item of particular interest connected with next year's expenditure is the continuance of the appointment of the Commissioner of Rural Reconstruction for another year and the provision of one lakh for schemes that may be approved in connection with this movement. I think the Punjab may congratulate itself on being the home of the rural reconstruction movement. Long before it had become fashionable with either official or non-official agencies to try to improve the surroundings of the villager and to provide him with extra means of livelihood and with some recreation after his unceasing toil, Mr. Brayne had taken the work in hand with characteristic energy, and he was soon followed by several other District Officers in the Punjab. He has outlived the initial period of criticism and ridicule and now the whole of India is following his lead.”

Whatever Government may have thought of cottage industries in the past, at the present time Government attitude towards them is friendly and sympathetic. There is no provincial Government which is not anxious to encourage them, and which has not taken practical steps to do so. Their importance is officially recognised. “Cottage industries,” says the review of the working of the Department of Industries of the Delhi Province for 1933-34, “are destined to play an important part in the economic life of the Province, as the insufficient earnings of the agricultural population point to cottage industries as a subsidiary means of livelihood.” There is a Department of Industries in every Province, and these Provincial Departments are mainly concerned with hand-workers, both in towns and villages.

The figures given below show the provincial expenditure on industries in certain years.

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PROVINCIAL EXPENDITURE ON INDUSTRIES (WHOLE OF INDIA)

				Lakhs
1921-22	64
1926-27	67
1929-30	..	..	..	91
1932-33	..	..	..	65
1933-34	..	..	..	68
1934-35	..	..	..	77
1935-36	..	..	..	90
1938-39	..	..	..	124

The provincial expenditure on industries increased from 64 lakhs in 1921-22 to 91 lakhs in 1929-30 and then fell to 65 lakhs in 1932-33. It has risen steadily since 1932-33, the budget figure for 1938-39 constituting a record.

It was to be expected that more money would be provided for industries by popular Ministers. Madras leads with an expenditure of 27 lakhs in 1938-39, U. P. and Bengal following with 21 lakhs each and Punjab with 20 lakhs. The U. P. Government provided 1 lakh for the improvement of the gur industry and 1.6 lakhs for hand-loom industry in its budget for 1938-39. Gur, charkha and khaddar are not by any means being neglected.

Incidentally it may be noted that the British Fascist leader, Sir Oswald Mosley, is a supporter of village industries for India. In his '*Greater Britain*' (new edition 1934) he writes: "We have failed to promote the development of Indian agriculture and village industry in place of the herding together of the Indian masses in virtual slavery in the new industrial cities, the chief object of which is to undercut Lancashire goods for the benefit of International capital."¹

WORK OF AN INDUSTRIES DEPARTMENT

The work of the Punjab Department of Industries in 1937-38 is briefly reviewed below just to show what this Department is doing for cottage workers and how.

¹ P. 142.

*the main aim is to supply concerned with handworkers at present.
It organises demonstration parties to teach the ignorant hand-workers
the use of new tools and implements as well as the latest designs*
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The expenditure of the Department in 1937-38 amounted to 20-1/3 lakhs, of which 4 lakhs were spent on industrial schools. Their number is 37, including private institutions which receive Government aid. The crafts taught in the industrial schools are: carpentry; blacksmithy; lacquer turning; weaving; carpet weaving; turning; mechanist, fitter and turner course; foundry course; metal work; sports gear; tailoring; *charpoy*-making; *chick*-making; cane-work; mechanical engineering; steam-engine driving; engine driving; shoe-making; fitter; electric work; electrician; and kindergarten. The number of students receiving instruction was 1700.

In addition to industrial schools, the following institutions are maintained by the Department: Mayo School of Arts, Lahore; Weaving Institute, Amritsar; Technical School, Lahore (including School for the blind); Zenana Industrial School, Lahore; Institute of Dyeing and Calico Printing, Shahdara; Demonstration Weaving Factory, Shahdara; Hosiery Institute, Ludhiana; Tanning Institute, Jullundur.

3 Over Rs. 19,000 was spent on the Department's Industrial Research Laboratory. The subjects of research were: extraction of oil from sun-flower and other seeds, production of margarine from indigenous vegetable oils, manufacture of oil from orange-peel, manufacture of starch from sangaras and gram, manufacture of paper and oil from the grass and leaves of khas plant.

→ 4 Three demonstration parties functioned during 1937-38. As a result of the demonstrations given by the Weaving Demonstration Party Punjab, Haiderabad, a dull and rapidly decaying locality, is flourishing again. Many improved spinning wheels have been taken up by women at Dera Baba Nanak, who are reported to be earning from Re. 0-1-6 to Re. 0-3-0 per day. The Weaving Demonstration Party, Leah, has taught local weavers the use of fast colours and also how to produce attractive designs by means of Jacquard machines. The Wool Spinning and Weaving Demonstration Party, Fazilka, has succeeded in introducing improved spinning wheels among women and pit fly shuttle looms among Dhanak weavers. There is also a Women's Travelling Demonstration Party.

The scheme for the development of cotton hand-loom weav-

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ing industry financed by the Government of India is working satisfactorily. Hundreds of new designs in printed goods have been introduced. Improved types of looms are supplied to weavers.

The training given in industrial schools 'helps in building up new industries or reviving old, decaying industries.'

The Industries Department assists industrialists with loans. A sum of Rs. 2 lakhs was advanced in 1937-38 in 35 cases.

Such, in brief, are the activities of the Punjab Industries Department; for a fuller account the reader is referred to the Report for 1937-38.

It may be noted that a Government Department of Industries (a) has whole-time, trained workers at its disposal with many years' experience of their work and technical knowledge of the industries they have to deal with; (b) has funds for 'pioneering' and 'demonstration' work, for the practical training of hand-workers in technical schools and workshops, for making loans to industrialists, for laboratory research on a small scale, for arranging exhibitions and fairs, and for collecting such information about village and other industries as it may require, and (c), which is not of little importance, possesses the authority and prestige of Government and enjoys the co-operation of village and other officials in collecting information and in all its dealings with village craftsmen and others.

The Industries Departments are doing useful work. But it has to be emphasized that the revival of cottage, including rural industries, in the face of machine competition is a hopeless task. The Census Reports for the United Provinces, Bengal and Madras contain notes on declining industries, which deserve to be read by everyone interested in this subject (the information has been summarized in the appendix to this chapter). All the information that is available confirms the view that the development of cottage industries is no means whatsoever of lessening the pressure on the soil.

CAUSES OF THE DECLINE OF COTTAGE INDUSTRIES

In the 16th and 17th centuries cottage industries supplied not only our requirements, but also those of other countries. India was

self-sufficient. Imports largely consisted of articles of luxury and comfort, meant for the upper classes, and of gold and silver. The character of our foreign trade has changed profoundly in the course of the past 300 years—a change for the worse. We are no longer self-dependent, and since September, 1931, we have been exporting gold on an unprecedented scale.

The effects of machine competition on our economy can be traced from decade to decade through the census of occupations. The proportion of the population dependent on industries has declined while that dependent on agriculture has increased.

In 1901 Agriculture supported 65·2 per cent of the population and Industry 15·5 per cent. The proportions for 1921 were: Agriculture 70·9 per cent and Industries 10·7 per cent. Taking actual workers, the number engaged in Industry was 15·7 millions in 1921 and 15·4 millions in 1931, a decrease of 2 per cent. On account of changes in classification it is difficult to compare the number of workers engaged in Agriculture in 1931 with that for 1921. The Report on the census of India, 1931, Vol. I, describes the decrease of agriculturists since 1921 (2·3 per cent) as 'apparent' and says that it "is not to be taken at its face value, on account of transfer of returns to 'domestic service' and to the unspecified category."² In view of the considerable increase (10·6 per cent) in the general population, the number of agricultural workers must have increased. In the Punjab, cultivators increased 25·7 per cent in the last decade as compared with the 14 per cent increase in population.

At first the causes of the increase in the proportion of agriculturists were not understood. The Census Commissioner for 1901 did not think that the increase indicated "a greater dependence on the land due to the abandonment of weaving and other indigenous industries."³ But the Census Commissioner for 1911 found himself confronted with the same phenomenon. He admitted that the increase in the number of landlords and cultivators was 'not wholly unreal.' The rise in the price of food-grains had rendered agriculture attractive, while, as he wrote, "the

² P. 289.

³ Report, 1901, p. 207.

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profits of various artisan classes have been diminished, owing to the growing competition of machine-made goods, both locally manufactured and imported," with the inevitable result that these classes showed 'a growing tendency to abandon their traditional occupations in favour of agriculture.'⁴

In the decade 1911—21 the rate of increase in the case of agriculturists was again faster than the growth of population, while industries 'substantially' declined.

An important historical fact emerges from the study of the occupation census—that the competition of machine-made goods, both home-made and imported, is responsible for the steady decline of cottage industries. It should be borne in mind that the number of those supported by Industry has reference largely to cottage workers. This competition has not ceased, and it affects cottage industries precisely in the same way to-day as it did before. The following reference to hand-loom weaving in the Report on the working of the Punjab Industries Department for 1932-33 possesses special interest:

"The hand-loom weaver was faced with an unprecedented competition from foreign countries particularly Japan, and also from Indian mills. The weaving of coarse cloth, especially Khaddar, ceased to be a paying proposition for the hand-loom worker."⁵

Most of us fail to realise the significance of these facts. The facts mean that from the point of view of nation-building, or our economic regeneration, cottage industries are of no importance. They are doomed to destruction, slow and gradual as the process of destruction may be. One can easily understand that even if a cottage industry enables a villager to earn 2 pice a day, it is better than earning nothing at all. But as machine competition grows, the 2 pice will be reduced to one pice, and then to less than a pice. Our economic ideal should have a progressively increasing, not decreasing value.

⁴ Report, 1911, p. 413.

⁵ P. 5.

Today the industrial development is closely linked with national defence?

INDIA BEFORE AND SINCE THE CRISIS

The Indian Agricultural Commission made useful recommendations regarding rural industries. What, in the opinion of the Commission, was most required to stimulate their development, was new ideas. The Commission placed careful and thorough instruction in modern processes next in importance. "But," they said in conclusion, "even with the aid of new ideas and assistance in training and marketing, the contribution which rural industries can make, in reducing the heavy pressure on the land, is infinitesimal, and in the nature of things they cannot, as a rule, hope for ever to survive the increasing competition of organised machinery. In some cases, we are afraid that an altogether exaggerated importance is attached to their development, whereas sound reflection would show that their possible expansion is strictly limited."⁶

The Commission, writing in 1928, did not know that extreme importance would be attached by the country to the development of cottage industries in the years to come. But their conclusion is as valid to-day as it was in 1928. One may go further and say that under existing conditions, when Indian organised industry is making rapid progress, the possible expansion of cottage industries is even more limited than before,

→ Cottage industries would prosper if machine competition could be eliminated. But is that possible? British imports have played the most important part in their destruction. And today, even if competition from Japan, Germany and Italy ceased, British competition would continue. Then there are our own mills and factories. The position of the cottage worker is hopeless.

In formulating economic ideals and framing economic policies we should never forget that economic forces are more powerful in their operation than sentiment. In our country, particularly, where the purchasing power of the masses is very little, wherever and whenever cheaper goods can be supplied by factory industries (whether Indian or foreign), they will be preferred to more expensive hand-made goods even of superior quality. Sentiment counts for little in business matters. The force of sentimental appeals to patriotism and philanthropy is soon spent.

⁶ Para, 500.

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Is it possible to revive the *gadda* goods service in competition with the railway? The revival of cottage industries in the face of machine competition is not more easy.

It is not meant that the cottage worker should be left to his fate. The Government may help him, and the Government is helping him. But the assistance given to the cottage worker is of the nature of charity. It is not nation-building. From this point of view even the work of Government Industries Departments, and the large sums spent by them every year, are of no significance.

WORLD FORCES AND TENDENCIES

In devising programmes for improving the economic position of the village people through the development of subsidiary industries we cannot afford to ignore world economic forces and tendencies which have, in recent years, altered the whole structure of industry in the West and the conditions under which international competition is carried on.

These forces and tendencies relate to business organisation, and they are important enough to be called a second industrial revolution. The first industrial revolution took place in England in the last quarter of the 18th century. The second began in America after the war. A Dutch writer, Mr. P. Lieftinck, makes a sharp distinction between the two.⁷ The first, he says, was concerned with tangible methods of production. It gave the world specialised machinery, led to the concentration of labour in factories, and created the system of mass production. The second industrial revolution is more concerned with 'intangible' methods of industrial management. It has led to the organisation of production and sale according to new principles. But the line of demarcation between the two revolutions is not distinct. Progress since the war has not been limited to any one direction. Mass production and mechanisation have been developed side by side with fundamental changes in business management, and the two movements are interconnected. 'Methodical production' is a necessary result of mass production.

⁷ *Economische Opstellen* (Haarlem, 1931), p. 172.

Consider the progress in the mechanisation of industry. This consists in the division and sub-division of each task to be performed until it is reduced to a few simple, mechanical movements which can be easily learnt. In 1924, in the Ford works, only 1 per cent of all jobs (tool making and die-sinking for example) required 1 month to six years' training. For 36 per cent of all jobs the period of training was from 1 day to 1 week, and for 43 per cent of all jobs a training of just one day sufficed. The demand for skilled labour has diminished with the increasing mechanisation of industry. Mechanisation has also shortened the period of production. In 1920, in the Ford works, the period of production from the arrival of the ore at the plant to the shipment of the finished car was 21 days. It is now 30 hours.⁸ A not less interesting aspect of mechanisation is the incredible saving of labour. In 1926, when German industrial organisation was far behind the American, the number of workmen required to make a complete motor car in a German works was 120, in another 350 and in a third no less than 450, while Ford made a whole car with only $5\frac{3}{4}$ men, not even whole 6.⁹

Mechanised production requires huge initial capital investment. The cost of plant for producing a new model of the Ford car (1927) was estimate at 100 million dollars, or more than 27 crores of rupees.

Mechanisation is one example of rationalisation of industry. Another is the application of methods of psycho-analysis in the selection of workmen. Workmen are not enrolled haphazardly, but after careful tests. Time-studies and motion-studies help in discovering the best methods of performing a given task. The seats, platforms, speed and lighting are all carefully attended to—they affect productivity. The result is a great increase in production and decrease in cost. Between 1919 and 1925, in the United States, productivity per man-hour increased 40 per cent in steel works and rolling mills, 52 per cent in cement manufacturing, 93 per cent in petroleum refining, no less than 139 per cent in the

⁸ *The Economic Tendencies of Today* by Stephen Viljoen, p. 145.

⁹ *Die Arbeitslosigkeit der Gegenwart* by M. Saitzew, 1932, Part II, p. 141.

manufacture of automobiles and 142 per cent in the manufacture of rubber tyres.

America leads in rationalisation, but the movement has affected all Western countries. In the East Japan has modernised her industries and, aided by cheap labour, she is steadily expanding her industrial output, particularly that of essentially modern articles. The use of time-saving and labour-saving machinery, accompanied by standardisation of production and elimination of waste, explains how Japan is able to sell many things in India at prices which are ridiculously low, and which would have been considered impossible 20 years ago.

International competition is more intense today than it was before the war. The growing intensity of competition and the difficulties experienced by British manufacturers in retaining their old markets account for some of the safeguards in our new constitution. Britain did not need these safeguards 75 years ago.

The village reconstruction programme ignores the revolution in industrial organisation and methods in foreign countries which have enormously increased their power of competition as compared with that of the Indian hand-worker. The rest of the world talks in terms of rationalisation, and India in terms of charkha and khaddar! Economic reconstruction in India means reversion to antediluvian methods of production!

Our main conclusions on this subject may be stated thus:

- ✓ 1. The most that can be said for cottage industries is that they will enable village people to make a very slight addition to their income from cultivation.
- ✓ 2. But the products of cottage industries are exposed to machine competition.
- ✓ 3. The effect of this competition is ruinous. It accounts for (a) the steady decline in the proportion of the population dependent on Industry and (b) increase in the proportion of the population dependent on agriculture.
- ✓ 4. Cottage industries are no means of relieving the heavy pressure on the land.

5. The rationalisation of industry in foreign countries has intensified machine competition a hundredfold, and it is not possible for India to escape this competition.

6. Economic reconstruction, based on cottage industries, is not only of very limited utility, but of progressively diminishing utility.

7. While it is not possible to save the cottage worker from eventual destruction, we may assist him in his unequal struggle with machinery so long as it lasts. The best way of doing so is through Government Industries Departments, which have adequate funds at their disposal and the assistance of a technical staff necessary for the purpose.

RURAL SELF-SUFFICIENCY

The idea of making the village people 'self-reliant and self-sufficient,' is attractive. Let us consider the exact extent to which village people are not self-reliant and self-sufficient at present, and of the increase in their prosperity which self-reliance and self-sufficiency would bring.

The figures given below have been borrowed from one of the invaluable studies by Prof. Karter Singh of the Lyallapur Agricultural College—"Family Budgets, 1932-33, of Four Tenant Cultivators in the Lyallpur District."¹⁰

The four tenants, along with 36 others, cultivated the Risalewala Government Farm of a little over 800 acres. The accounts of this Farm are available for a number of years and are of extraordinary interest. The four tenants cultivated in 1932-33 about a square of land each (the average amount of land per cultivator in the Punjab is about 7 acres; a square is equal to about 28 acres). The total family income and the family expenditure of the four tenants are shown by the statement given below:

¹⁰ Published by the Board of Economic Enquiry, Punjab.

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TOTAL FAMILY INCOME AND EXPENDITURE OF 4 TENANTS, A, B, C, D

	A		B		C		D	
	Rs.	as.	Rs.	as.	Rs.	as.	Rs.	as.
Income from cultivation	413	14	243	7	530	5	358	8
Sale of milk ..	21	7	7	0	18	11	6	2
Picking cotton ..	12	0	4	11	4	7	7	3
Carting ..	....		....		3	2	5	6
Casual labour ..	2	13	2	3	13	8	3	15
Total Income ..	450	3	257	5	570	2	381	3
Total Expenditure ..	469	8	406	14	457	4	544	14

It will be seen that in three cases out of four expenditure was greater than income. In the case of tenant C alone income from cultivation exceeded total expenditure.

The Farm is cultivated on the *batai* system, that is, the gross produce is shared half and half between the Government as landlord and the tenants. The tenants do not pay the land revenue, but the whole of the water rates. As a rule, tenants of private landlords pay half the land revenue and half the water rates. Paying the whole of the water rates but no land revenue imposes about the same burden on the tenant as paying half of both charges.

We may also note that the net returns of this Farm to Government in 1932-33 were Rs. 20,197, while the net returns to the 4 tenants amounted to Rs. 10,793. The share of the landlord in the net income (found without making any allowance for the wages and profits of the cultivators) was something less than double that of the worker.

On an average the total family income of a tenant from all sources, taking our 4 tenants alone, was Rs. 415 as against an average expenditure of about Rs. 470. The gap between average expenditure and average income from cultivation alone was wider.

How was the income spent, or what are the main items of a cultivator's expenditure?

Food and clothing account for 85 per cent of the expenditure (food 64·3 per cent and clothing, including shoes, 20·7 per cent). Fuel costs nothing. Other items are: housing 0·6 per cent,

medicine 1'0 per cent, light 1'3 per cent, education 0'1 per cent, religion 1'4 per cent, travelling 6'0 per cent, social ceremonies 1'1 per cent, amusements and luxuries 1'6 per cent, and miscellaneous 1'9 per cent.

We are particularly interested in the expenditure on goods and services which were not furnished by the Farm, and its proportion to total expenditure, for that will give us the exact measure of the lack of self-reliance and self-sufficiency of these cultivators. The total expenditure per family amounted to Rs. 469-10 of which Rs. 264-15 was spent on goods and services supplied by the Farm (56'4 per cent of total) and Rs. 204-11 on those supplied by the external world (43'6 per cent of total).

It appears thus that to the extent of more than half of their total needs these tenants were self-reliant and self-sufficient.

What were the goods and services which they procured from the outside world? To what extent was it possible for them to avoid making external purchases?

The minor items may be considered first. The expenditure given is average expenditure per family.

(1) Housing, including furniture, cost Rs. 2-10. Housing means repairs, and furniture does not mean tables and chairs.

(2) All medicines were purchased from outside. Price Rs. 4-11.

(3) For lighting kerosene and rape-seed oil were used. Kerosene is cheaper. Other costs under this head represent recurring charges on account of repairs and replacement of lamps, chiefly hurricane lanterns. Lighting cost Rs. 6-2.

(4) Religion accounts for Rs. 5-6. The tenants, who are Mohammadans, paid this amount to the Maulvi of a mosque.

(5) Rs. 28 was spent on railway travelling.

(6) The expenses incurred in connection with social functions (marriage, betrothal, birth, etc.) amounted to Rs. 5-4.

(7) The amount spent on education was insignificant, 10½ annas.

(8) Amusements and luxuries (festivals, fairs, cinem...

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theatres, drinks, tobacco and other personal enjoyments) cost Rs. 7-10.

(9) Miscellaneous payments to the outside world amounted to Rs. 3-8.

The total of these payments is Rs. 63-12, or 13·5 per cent of total expenditure.

It will be admitted that these payments are moderate in amount and unavoidable. In some cases (religion, social ceremonies and amusements) the expenditure is abnormally low. It is obvious that no tenant spent money on the marriage of his own son or daughter. In the case of Hindu villagers, as a rule, social ceremonies would account for at least 5 or 6 per cent of total expenditure, instead of 1·1 per cent, as in the present case. As regards education, medicine and travelling, an increase in expenditure would be highly desirable.

The two remaining items are food and dress. The tenants spent Rs. 54-9 per family on the purchase of food from outside. 81·9 per cent of the expenditure on food was on the products of the Farm and 18·1 per cent on purchased food.

The articles purchased were refined sugar, rice, meat, pulses (*mash* and *massur*), fruits, vegetables and salt.

The consumption of *gur* amounted to 37·8 seers per adult male, and of refined sugar 4·8 seers costing Rs. 1-8.

Some consumption of refined sugar must be allowed for. It is used on special occasions, particularly when guests come, and for purposes which are well known. The dependence of villagers on the external world for the food-products mentioned is inevitable. Salt is a necessity of life.

Payments for food to the outside world amount to 11·5 per cent of total expenditure. Adding to this the expenditure on the nine items mentioned above (13·5 per cent), it is found that 25 per cent of the expenditure, out of a total of 43·6 per cent, incurred for purchases from outside, is necessary.

There finally remains the big item of dress, Rs. 97-2 per family, of which 88·9 per cent was spent on cloth from outside. Cloth to the extent of 11·1 per cent was made at home—not by the tenants but by the village weaver. The cultivator is not a

weaver. The rest of the cloth was acquired through exchange for home-spun yarn or purchased with cash.

It is well-known that village people wear *kḥaddar* habitually. But there is a demand for mill-made cloth (whether Indian or imported) for special purposes, e.g., as presents to relatives or for use at special functions (marriages, festivals, etc.). This mill-made cloth is finer and more gaudy than *kḥaddar*, though not necessarily more durable. Villagers need not buy mill-made cloth.

All that the campaign to make villagers self-reliant and self-sufficient means is this: that the money which they spend on mill-made cloth may be spent on *kḥaddar*. The campaign affects about 19 per cent of the total expenditure of the cultivator.

Can the cultivator be persuaded to give up the use of the fine and gaudy mill-made fabrics?

Can we, who live in towns, do without silks, carpets, high-powered motor cars and radio-sets?

All of us spend a little money on luxuries or things which please our vanity.

The utmost that one may hope to achieve is a slight reduction in the use of mill-made cloth and an increase in the quantity of yarn produced in the villages. The cultivator cannot be made much more self-reliant and self-sufficient than he is at present.

APPENDIX: COTTAGE INDUSTRIES

UNITED PROVINCES

Indigenous industries "are rapidly declining" for the following main reasons:

- ✓ 1. Machine competition. Machine-made goods are cheaper, are better advertised, and present a wider range of choice.
- ✓ 2. Small industries in articles of luxury are subject to changes of fashion and ideas.
- ✓ 3. Both the former patrons and producers are poorer than they used to be. Improvidence and intemperate habits have made the cottage worker poor.

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4. Lack of co-operation among workers. They undercut each other and spoil the market. The price at which the neediest worker sells rules the market. By combining the producers will be able to raise prices.

5. Loss of skill and knowledge. This is partly the result of the falling off in demand.

"The improvement and extension of the cottage industries of the province," says the Census Commissioner, "is of vital importance. It would seem that the only remedy is for commercial men to pick out the cottage industries the products of which are likely to meet with a demand in this country, improve the processes as far as possible, and advertise and make arrangements for distribution."¹¹ He thinks the competition with machine-made goods in the United Provinces is of significance to organised industries, but "of secondary importance to the development of cottage industries."

The more important cottage industries are the following:—

Papier Mâché in Badaun City. It is stated to "have fallen on evil times." The local manufactures cannot find even a local sale "in the face of the showy Japanese and German goods sold everywhere."

Amroha City once produced cotton pile-carpets which "adorned palaces at Delhi and Agra." Many small industries in the Moradabad District have been destroyed by money-lenders.

Amroha produces durries, which have also been affected by competition from cheap machine-made durries. Other declining or extinct Amroha industries are: embroidered caps (which have been replaced by the fez), embroidered waistcoats, *saris* and other articles of dress, brass fittings for carts and palanquins, the glass industry, "which has completely disappeared due to imported articles from Bombay and Japan," swords, *dholaks*, pottery, combs, and horn articles.

The brassware industry of Moradabad is flourishing. It is now using electrical machinery to fashion the vessels. Sheet-brass is replacing *bharat* brass. *Kalai* (tinning) is being displaced by

¹¹ Census Report for the United Provinces, 1931, p. 424.

"yellow polish." These changes are reducing the number of people employed in the industry.

Village artisans in the Etawah District are abandoning their crafts and taking to agriculture for a livelihood. The glass bangles industry is not doing well, but Etawah silk and cotton cloth still have a market.

Phul (vessels made of a special alloy of copper, tin and certain other metals) and brassware industries of the Ballia District "are at present suffering acute depression." The demand for polished earthenware jars (decorated with geometrical designs or flowers) and for locally made perfumery has also fallen.

"Garhwal reports that cotton growing and spinning has died out completely in the last 50 years in the face of outside competition."¹² The import of metal wares has ruined the manufacture of wooden cooking and drinking utensils. Basket-making is also dying as a result of external competition.

Rai Bareli District makes crude glass phials, domestic utensils, and iron nut-crackers. "The fine muslin weaving of Jais, Nasirabad and other places is now reported to be extinct as a result of the spread of the cheaper machine-made varieties."

Some demand exists in Nepal for cloth woven and printed in the Fyzabad and Gonda Districts.

There is a considerable export from the Gonda District of *ban̄as* grass used in making paper. *Patwa* fibre is also pressed and exported.

Cloth-weaving and calico-printing have declined for the usual reason. *Bab̄ka* grass is made into ropes in the Bahraich District and exported.

The indigenous sugar industry is declining in all districts. Flour mills have replaced hand-grinding in most towns.

DECAYING INDUSTRIES OF BENGAL

Blaksmith are found at work in every district of Bengal. They make primitive implements used in cultivation, tyres for bullock carts and locks of a simple type.

¹² *Ibid.*, p. 425.

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Blanket-making is an industry of Western Bengal.

Boat-building is practised wherever there is water. Chittagong was once famous for its ship-building, and still makes a characteristic type of sea-going boats.

"Indigenous brass and bell-metal industries have been seriously affected by the importation of cheap enamel, aluminium and porcelain vessels."¹³

Cotton-weaving is the most universal home industry. Silk of more than one kind is reeled, spun and woven in several parts of the province.

Other industries are the making of cart-wheels; conch shells; dyes (the making of vegetable dyes is now extinct in Bengal); *gur* and sugar; articles of horn; lac toys; lime (from *kankar*); mats; basket and wicker-work; measuring bowls of wood ornamented with brass plates; pottery; sola helmets from the pith or the soft, white wood of the *sola* plant, and also toys, decorations, and bridal crowns; and vegetable oils. As illuminations, vegetable oils "have been ousted by cheap kerosene."¹⁴

DISAPPEARING INDUSTRIES OF MADRAS

The industries which have disappeared or are disappearing from Madras are the manufacture of glass bangles (now extinct); paper; *Kalam Kari* or printed cloth (chief seat Masulipatam); pithwork, including garlands; musical instruments and ornamental fans of Tanjore; indigo; toys; lacquer-work; boats (boat-building experienced a temporary revival at the outbreak of the war on account of the shortage of vessels); *Juthas* (a conveyance); gold and silver lace-thread; crochet-lace and artistic pottery. Jutka-building is declining on account of the development of motor transport and the opening up of the country by the railway. Some of the causes of the decline of crochet-lace industry are (1) changes of fashion, (2) keen competition of Japanese lace and of machine-made lace imported from other countries, and (3) high duties levied in the United States of America and other countries.¹⁵

¹³ Census Report for Bengal, 1931, p. 304.

¹⁴ *Ibid.*, p. 309.

¹⁵ Census Report for Madras, 1931, p. 250.

COTTAGE INDUSTRIES IN THE PUNJAB

Valuable information about cottage industries in the Punjab towns and rural areas is given in a monograph entitled "*Survey of Arts and Handicrafts in the Punjab*," prepared by the Punjab Department of Industries. I am indebted to the Department for permission to use it. It is hoped that the monograph will be soon published.

A village community requires articles of domestic use, and agricultural tools and implements. It is the function of village artisans to meet these requirements. A very large proportion of the goods that they produce is thus meant to satisfy a local demand.

The weaver produces coarse cloths of various descriptions, i.e., *durries*, *khes* (bed-spread), *dotahis* (bed-spread), *chadars*, *Khaddar*, *tehband* (waist-cloth), *lungis* (turban-cloth), *daryais* and coarse woolen *lois*, blankets, etc.

The blacksmith supplies agricultural implements made of iron such as ploughshares, axes, rakes, scythes, and iron pots, fans and other utensils. Expert blacksmiths make Persian wheels and spare parts.

The carpenter supplies agricultural implements made of wood and articles of domestic use.

The shoemaker supplies leather parts of agricultural implements and shoes, the blacksmith's bellows, the water-carrier's *mashaḥ*, leather thongs, whips, etc. The potter makes glazed and unglazed clay crockery and toys, earthen vessels, *hukḥas*, *chilams*, bricks, etc.

Other rural craftsmen are tanners, oil-millers, tailors, goldsmiths, dyers, masons, calico printers, utensilmakers, brick-moulders, and rope and string manufacturers.

The following village industries also deserve to be mentioned:

Leather tanning (Lahore, Multan, Sialkot and other districts), weaving of specialised designs (Multan and Hoshiarpur, and near Leih and Bhera), wool-weaving (Muzaffargarh and Kulu valley), silk-weaving and Multani *lungis* (Multan, Hoshiarpur and Amritsar), mat-making and basket work (Muzaffargarh), Persian wheels, reed-stools with and without arm rests (Kasur), papier

mâché and clay toys (Kangra), Damascene work, weighing scales, lacquer-work, spinning wheels and *piras*, mother-of-pearl buttons, links, hair-clips, earrings, watch-chains, bracelets, necklaces, rings, etc. (Jullundur), shellac (Jullundur), woollen blankets and rings (Jullundur), chased lacquer-work (Hoshiarpur), fodder-cutters, sugar-cane presses, oil engines and sugar centrifugals (Jullundur), trouser-strings, brass and ivory inlaid and carved furniture and lacquer-work toys (Hoshiarpur), brass and copper utensils (Hoshiarpur), cutlery (Gujranwala), floor-durries (Gujranwala), wooden combs, and harness and saddlery (Gujranwala).

The industry which supports the largest number of craftsmen is cotton-spinning, weaving and sizing—2½ lakhs of male and female workers in the Punjab.

Most of the articles produced by village craftsmen are crude and bulky, and the external demand for them is negligible. It is further stated:

“The output of industrial products, both for the market and household consumption, has declined considerably owing to the heavy imports of cheaper substitutes.”

This is true of both agricultural implements and articles of domestic use.

The wooden Persian wheel is being replaced by iron Persian wheels fitted with galvanized iron-sheet buckets, the wooden flour mills by iron-mills, the hand-chopper by the mechanical cutter, and the wooden sugar-cane crusher by the iron-roller. Cheap tin enamel-ware and aluminium-ware are replacing the products of the village potter and metal utensil makers.

As the result of this competition the profits of rural artisans have fallen “to the barest minimum.”

The position of most of the hand-workers in towns in this respect is very much the same: “The importance of the articles produced by handicraftsmen is declining on account of cheap imported substitutes and Indian mill-made goods which come into competition with them.”

A list of the handicrafts practised in the towns of the Punjab is given below:—

METAL: Steel trunks; masonry instruments; utensil of brass, copper and bronze; locks; carpenter's tools and instruments; knives; swords; kirpans; scissors and razors (Jagadhri); iron vessels and almirahs (Jagadhri); iron safes (Amritsar and Gujran-wala); tinware; iron railing and gates; gold and silver-refining; fly-shuttle loom (Amritsar); galvanized iron sheet trunks, tubes, buckets, etc. and Persian wheels; iron chairs and tables; macaroni machines and brass handles for almirahs; tailor's iron; joiner's hammer; charcoal boxes; wool-clippers; sugar-pans and *harahis* (Batala); *Kharas* or flour-mills; cutlery (Wazirabad); hunting and garden knives (Wazirabad).

TEXTILE: Cotton bed-sheets; silk lungis; woollen *chaddars* and *dhussas* (Jalalpur Jattan); woollen blankets (Punipat); silk saris, shirtings and suitings; artificial silk; daryai shirting and curtain cloth; raffle cloth; machine-embroidered shawls (Lahore and Amritsar); dyeing; cotton piece-goods; wool-cleaning (Fazilka); cotton and wollen yarn; cotton tussore; trouser-strings.

ARTISTIC: Fancy wood-work (Chiniot); embroidered kullahs; clay toys (Ropar); glazed pottery (Multan); calico-printing; chicken-dozi; ornamental painted leather vessels (Multan); carpets (Multan and Amritsar); silver-enamelled goods; ivory boxes; lacquered wood-work; gota-kinari; embroidered shoes; artificial jewellery; phulkari embroidery (Jullundur); lac bangles; gold and silver ornamental utensils.

LEATHER: Gut (Sialkot); tanned leather; bottles and jars for containing oil (Jhang); boots and shoes (Karnal and Hansi); belting; harness and saddlery; Indian shoes.

WOOD: Basket-ware; furniture; cane walking-sticks; combs of horn and wood; cart and cart-wheels; bed-legs; wooden slippers, flutes (Kartarpur); packing boxes.

MISCELLANEOUS: Sports goods (Sialkot); musical instruments; hand-made paper (Sialkot); book-binding; ink; card-board boxes; shellac; brushes; chik-curtains; bricks; hemp-ropes; tiles (Amritsar); patra-mats and brooms; sugar candy (misri and kuza); confectionery and bakery goods; jams, chutney

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and pickles; vinegar; bar-soap and toilet soap; perfumery; essences and hair-oil; perambulators and tri-cycles (Amritsar); tobacco; non-leather shoes with soles of worn-out motor tyres; candles; dhup (incense); phenyl and disinfectant fluids; lime, surkhi and khaka; chalk; pencils and crayons (Gujranwala).

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Problems connected with Indian labour were examined by the Indian Labour Commission, appointed in 1929. The recommendations of the Labour Commission, which covered a wide field may be divided into three groups:—(1) conditions of employment and work, (2) the standard of life of the worker, and (3) general questions relating mainly to the industrial worker, namely, workmen's compensation, trade unions and trade disputes.

As regards hours of work the Commission suggested a weekly limit of 54 with a daily limit of 10 for adults, and 5 for children of from 12—15, instead of the then prevailing 60 and 11 for the former and 6 for the latter. Detailed recommendations were made regarding rest-intervals, spread-over of hours and exemption of factories from the provisions of the Factories Act relating to hours of work.

Working conditions in factories were subjected to a careful examination and recommendations made for improving the welfare and safety of the workers under the headings: Health, Safety, Welfare and Administration. Special stress was laid on amenities for working mothers.

As regards seasonal factories (cotton ginning and pressing factories, tea factories, rice mills and jute presses) the Commission recommended the establishment of standards "which may not be identical with those of perennial factories, but which will be enforced with as much vigour as is applicable to the latter."

The Commission drew pointed attention to certain gross abuses of child labour in seasonal factories, i.e., unhealthy conditions of work, corporal punishment in some places, long hours and low pay (2 annas for 10 or 12 hours of work). The recommendations of the Commission regarding the pledging of the labour of persons under 15 years were meant to apply to all, and not merely to unregulated factories (i.e., factories using power but employing less than 20

persons, or factories using no power but employing a substantial number of workers).

Weekly hours of labour in mines were fixed by law at 60 above ground and 54 below. Under existing regulations women are to be entirely excluded from underground work after July 1st, 1939. The Commission recommended reduction in hours of work above ground to 54; that recruitment of women for underground work be discontinued; and that children under 14 be excluded from work in or about mines.

The Report of the Commission vividly describes the deplorable housing conditions in industrial areas. The Commission urged the need for town-planning Acts in Bombay and Bengal, and asked the Government to lay down minimum standards regarding cubic space, ventilation and lighting, drainage and sanitation, and to insist on the adoption of model bye-laws issued by them (Government). The Government were also to subsidise in various ways employer's building schemes approved by them. The Commission also recommended the strengthening of the Provincial Public Health Departments and the enactment of comprehensive public health measures. Particular attention was to be devoted to anti-malarial measures and to maternity welfare; the enactment of maternity benefit schemes was suggested.

The Commission recommended the extension of the Workmen's Compensation Act of 1923, and the improvement of scales of compensation.

In regard to trade unions the Commission recommended that registration of unions should be encouraged and their recognition made easy. The Trade Unions Act was to be re-examined in not less than three years time.

The Commission recommended collaboration between the employer and the Trade Union (where such exists) in the formation and working of Works Committees. Also there should be a larger body of representatives of workers and employers of the industry in the centre concerned. The establishment of some permanent statutory machinery to deal with trade disputes was to be considered before the expiry of the Trade Disputes Act of 1929 in 1934.

Meanwhile Government were to utilise their power to establish Boards or Courts where considered necessary or useful. Every provincial Government was to have an officer or officers to undertake the work of conciliation and bringing about private agreement.

- The Commission also recommended that in the frame-work of the future political constitution provision should be made for an Industrial Council which would enable representatives of employers to confer regularly on labour measures and policy. Labour representatives should be elected by registered Trade Unions or, failing this, nominated by Government. The functions of this Council were thus defined:

- (1) to examine proposals for labour legislation referred to it and also to initiate such proposals;
- (2) to promote co-operation and understanding among those concerned with labour policy;
- (3) to advise the central and provincial Governments on the framing of rules and regulations;
- (4) to advise regarding the collection of labour statistics and the co-ordination and development of economic research.

GOVERNMENT ACTION ON THE REPORT

Special reports show the action taken by the Government of India and provincial Governments on these recommendations.

Many of the recommendations which involved central legislation have been given effect to in the Factories Act of 1934. This Act repeals the Indian Factories Act 1911 and the amendments of the Act in 1922, 1923, 1926 and 1931.

✓ Working Hours of Adults.—The weekly limit is 54 hours for perennial factories and 60 hours for seasonal factories.¹

Sunday will be a holiday except in cases specially provided for in section 35.

¹ There is no change in the definition of a factory. As before it is a place where power is used in manufacturing processes and not less than 20 persons are employed daily.

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✓ Daily hours.—The limit is 10 for perennial and 11 hours for seasonal factories.

There will be a rest interval of one hour after six hours of work, or of $\frac{1}{2}$ hour after 5 hours work, or two rest intervals of $\frac{1}{2}$ hour before any one works for more than $8\frac{1}{2}$ hours.

Spread-over.—The periods of work of an adult worker in a factory shall be so arranged that along with his intervals for rest they shall not spread over more than 13 hours in any day.

The Local Government may make rules for adult workers providing for the exemption of workers engaged on urgent repairs, or in work which, for technical reasons, must be carried on continuously, etc., from the rules mentioned above. But no exemption from the provisions of section 36 (daily hours) may be granted in respect of any woman; no woman is allowed to work in a factory except between 6 a.m. and 7 p.m.

Special provision has been made for night shifts, and for extra pay for over-time (ordinarily $1\frac{1}{2}$ times the ordinary rate of pay).

Adolescents and Children.—No child (defined as a person under 15) who has not completed his 12th year shall be allowed to work in any factory; non-adult workers (children and adolescents) shall carry tokens giving reference to certificates of fitness.

No child shall be allowed to work in a factory for more than 5 hours any day, and the hours shall not be spread over more than $7\frac{1}{2}$ hours. No child shall be allowed to work except between 6 a.m. and 7 p.m.

Adult labour may not be exacted from an adolescent (defined as a person who is below 17 but has completed his 15th year), unless he has been granted a certificate of fitness to work in a factory as an adult.

Chapter III of the Factories Act of 1934, which is concerned with health and safety, contains provisions relating to cleanliness, ventilation, artificial humidification, cooling, over-crowding lighting, water, latrines and urinals, precautions against fire and means of escape, safety of buildings and machinery, tests of stability of building or machinery, etc., notice of certain accidents and other

Hand-making factories - employed over 600, children, paid low wages.

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matters. The recommendations of the Labour Commission have been carried out.

The Commission had recommended the application of certain section of the Factories Act to unregulated factories. The extension of regulations to unregulated factories raised questions of difficulty "especially at a time when financial considerations make it impossible to contemplate any substantial increase in the strength of the inspecting staff."² Government legislative action has been limited to recommendations involving the alteration of the law applicable to factories already subject to regulation. But effect has been given to the recommendation of the Commission that a bond pledging the labour of a person under 15 years executed for or on account of any consideration should be considered void. The Children (Pledging of Labour) Act was passed in 1933. An agreement to pledge the labour of a child shall be void, but an agreement made without detriment to a child, and not made in consideration of any benefit other than reasonable wages to be paid for the child's services (terminable at a week's notice) is not an "agreement to pledge the labour of a child."

MINES

A Bill to amend the Indian Mines Act of 1923 was introduced in the Legislative Assembly in January, 1935. It provides for a weekly day of rest, and limits hours of work above ground to 54 a week and 10 in any day. The periods of work along with intervals for rest shall not be spread over more than 11 hours.

The following are the provisions of the bill relating to hours of employment below ground:

(1) The periods of work of a person employed to work below ground in a mine shall be reckoned from the time he leaves the surface to the time he returns to the surface and shall not in any day spread over more than 9 hours.

(2) No such person shall be allowed to remain below ground except during his periods of work.

Women are not worked in mines underground.

² Second Report showing the action taken by the Government on the Report of the Labour Commission, p. 8.

Shift-system
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Work above ground shall not be carried on in any mine for a period exceeding 11 hours in any day, except by a system of relays so arranged that not more than one relay of persons employed in work of the same kind shall be at work in the mine at the same time.

The Labour Commission said that they would "like to see the possibilities of 10 and 9 hour shifts explored, as well as the more usual 8 hour shift."³ The bill reduces the daily limit to 11 hours. It was thought that a daily limit of less than 12 was objectionable from the point of view of the workers, who would be unable to maintain the current level of earnings. But the Labour Commission found that some of the larger collieries were working 8 hour shifts, and other collieries 10 hour shifts. "It is significant," wrote the Commission "that at such collieries the attendance and the level of earnings tend to be higher than prevail at collieries working longer hours, and it is not suggested that earnings at such collieries are below the general level."⁴

Some other recommendations regarding mines are under consideration, one of them relating to underground piece-workers. The Commission recommended that underground piece-workers should be credited for purposes of payment with a minimum output for each shift worked, not exceeding the normal daily output of a man of average skill and industry, and that this standard output should be fixed by Mining Boards.

PAYMENT OF WAGES

In organised industry in India the monthly payment of wages is the rule. The Labour Commission favoured the adoption of the system of weekly payments, but were not prepared to advocate its general enforcement by Government. They, however, recommended the prevention of delayed payments. As the Government of India stated to the Commission, it was no uncommon thing, and the rule in certain industries, for monthly wages to be systematically

³ Report of the Labour Commission, p. 126.

⁴ Ibid., p. 126.

withheld until a fortnight after the close of the month to which they related. The Commission's recommendation was that the law should insist on the payment of wages within 7 days from the expiry of the period in which they have been earned in the ordinary case.

The Commission also noted certain abuses in connection with deductions from wages. They found fining common in perennial factories and on railways. Other deductions were on account of medical attendance, education, reading rooms, interest on advances of the labourers' own wages, charities, religious purposes selected by the employer, and various other benefits or causes. A common practice in the textile mills was the handing over to the weaver of cloth from his own loom spoilt in the course of manufacture, and the deduction from his wages of the wholesale selling price. In some mills two days' pay was deducted for one day's absence.

The Commission considered legislation to regulate deductions from wages 'both necessary and desirable.'⁵ In the case of children they recommended the abolition of fines by law. A Bill to regulate the payment of wages to certain classes of persons employed in industry was introduced in the Legislative Assembly on the 13th February, 1935.

The Act will apply to factory employees, and, with the exception of section 5, to railway employees.

Section 5 provides for the payment of wages before the expiry of the 7th day from the last day of the wage-period in which the wages have been earned in the ordinary case.

The Act will recognise 11 kinds of deductions which may be made from wages and no other.* No child (person below 15 years) can be fined. In the case of adults, stringent rules have

⁵ *Ibid.*, 218.

* By way of fine for damage to or loss of goods entrusted to the worker; housing accommodation, or other specified services; recovery from the first wage payment of advances of money given before employment began; advance payment of wages already earned or in adjustment or over-payment of wages; other advances of wages made subject to rules framed by the Local Government; income-tax payable by the worker; deductions made under any order of Court or other competent authority; on account of any recognised Provident Fund; on account of payment to approved co-operative credit societies.

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been framed to regulate fines. Among other things, the total fine imposed on an individual in a month must not exceed an amount equal to half an anna in the rupee of the wages earned by him in that month. Fines and realisations must be recorded in a prescribed form. A deduction for damage or loss must not exceed the amount of the damage or loss caused to the employer by the neglect or default of the workman. Deductions for house accommodation or other services should not exceed the value of the service rendered, provided the house accommodation or other service has been accepted.

Claims arising out of deductions from wages or delay in payment of wages will be heard and decided by a suitable person appointed by the Local Government. ✓

WORKMEN'S COMPENSATION

The Labour Commission recommended that the old Act of 1923 should now be extended to cover as completely as possible the workers in organised industry whether their occupations were hazardous or not, and that there should be a gradual extension to workers in less organised employments; the Commission also mentioned particular classes which were to be included. In pursuance of these recommendations the Indian Legislature passed the Workmen's Compensation (Amendment) Act of 1933. The classes mentioned by the Commission have been included.*

The compensation payable in certain cases is given in schedule IV attached to the Act. In the event of death of an adult workman the amount of compensation payable rises from Rs. 500 when the monthly wage is not more than Rs. 10, to Rs. 4,000 when the monthly wage exceeds Rs. 200. For the same limits of wages, the

* Workmen employed in factories using power and employing not less than 10 persons, and in factories not using power employing not less than 50 persons; workmen in all mines, except open quarries in which less than 50 persons are employed and no explosive are used; workers employed in docks and in oilfields; certain classes of seamen; workers on tea, coffee or rubber plantations employing not less than 50 persons—no distinction has been made between Government and non-Government plantations; workmen engaged in building work; workmen engaged in connection with the generation and distribution of electrical energy; workmen engaged in the construction, maintenance or demolition of canals, sewers, public roads, dams, embankments, etc.

✓ amount of compensation for permanent total disablement of an adult workman varies between Rs. 700 and Rs. 5,600. In the case of temporary disablement half monthly payments are made: ✓ half his monthly wages to the injured workman earning not more than Rs. 10 a month, and rising from Rs. 6 to Rs. 30 in the case of others. The compensation in the case of a minor is as follows: death, Rs. 200; permanent total disablement, Rs. 1,200; temporary disablement, one-half of his monthly wages subject to a maximum of Rs. 30.

In the case of temporary disablement the half monthly payments begin after the expiry of a waiting period of 7 days from the date of the disablement and continue during the disablement, or during a period of 5 years, whichever period is shorter.

The number of cases reported and the amount of the compensation paid since the Workmen's Compensation Act came into force (1924) have increased. The number of cases reported in 1925 was 11,371 and the compensation paid was about Rs. 6½ lakhs; for 1936 the figures are 28,510 cases and Rs. 14,64,000 compensation. There were 1036 cases of adult deaths for which about 7½ lakhs of compensation was paid; there were 1,539 cases of permanent and 25,905 cases of temporary disablement.

The Trade Disputes Act of 1923, as amended in 1932, continues in force. The principal features of the Act are described below:

The Act is divided into three main parts. The first part relates to the establishment of tribunals for the investigation and settlement of trade disputes. If any such dispute exists or is apprehended, the Local Government or the Governor-General in Council may refer the dispute to a Court of Inquiry or a Board of Conciliation appointed for the purpose. On a Board of Conciliation, when it does not consist of independent persons, the parties to the dispute will be equally represented.

Neither party to a dispute would be under any obligation to accept the findings of a Court or the advice of a Board of Conciliation, but the decision of the Court or the Board will be published, and public opinion counts in such matters.

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The second part of the Act relates to public utility services. A public utility services is defined as any railway which the Governor-General in Council may so declare for the purposes of the Act; any postal, telegraph or telephone service; any undertaking or business which supplies light or water to the public; and any system of public conservancy or sanitation. Clause 15 of the Act makes it a penal offence for workers employed on monthly wages in public utility services to strike without previous notice.

The clauses relating to illegal strikes and lockouts follow closely the provisions of the British Trade Disputes and Trade Unions Act of 1927. They apply when both of the following two conditions are satisfied: (1) a strike or lockout must have other objects than the mere furtherance of a trade dispute within the industry concerned, and (2) a strike or lockout must be designed to coerce the Government either directly or by inflicting hardship on the community.

Provincial labour legislation relates to a variety of subjects, the most important of which are workmen's protection against moneylenders, trade disputes, maternity benefits, payment of wages and unregulated factories. The Bombay Industrial Disputes Bill (1938) provides for the registration of unions which have been recognised by the employers concerned or which fulfil certain requirements as regards membership. Strikes and lockouts would be made illegal until the machinery for conciliation provided in the bill has been made use of. Moreover conciliation will start to function immediately a dispute is likely to occur, for an employer or a workman who desires to make a change in wages or other conditions of employment must give notice of his intention to do so to the prescribed authorities and no change can be effected until conciliation machinery has been used to the fullest extent.

The Bombay Shops Bill fixes hours of work for persons employed in a shop at nine (with one hour's interval for rest) for adults and six for children and provides for 52 whole holidays in the year; further, Government may issue orders fixing hours at which shops must be closed. This is a useful piece of legislation which the Punjab might copy. At present shop employees work for long hours and practically without any holidays.

The Central Provinces Unregulated Factories Act, 1937, at present applies to (1) bidi making, (2) shellac manufacture and (3) leather tanning industries, but can be extended to any place wherein a manufacturing process or handicraft is carried on and wherein 25 or more persons are employed on any one day. The Act makes provision for the inspection of unregulated factories by qualified medical men, control of child labour and health and safety of operatives. Hours of work for adults have been fixed at 10 and for children 7. The Act prohibits the employment of a child in more than one factory in the same day and disallows him to work overtime or to take work home. Children seeking employment, who have completed their tenth year, will be examined by a certifying surgeon, who may grant or refuse to grant a certificate. The certifying surgeon may revoke any certificate granted to a child if he considers the child no longer fit for employment.

Provision is also made for a weekly rest day. The employment of women is prohibited before sunrise and after sunset, and hours of work for them are nine daily.

The regulation of conditions of work in unregulated factories was long overdue and it is hoped that the example of the Central Provinces will be followed by the other Provinces. The Labour Commission drew attention to the unsatisfactory condition of unregulated factories. They described bidi factories particularly as 'small, airless boxes, often without any windows, where the workers are crowded so thickly on the ground that there is barely room to squeeze between them.'

THE STANDARD OF LIVING

An inquiry into working class budgets was carried out by the Bombay Labour Office in 1921-22. 2,473 working class family budgets, and 603 single men's budgets—a total of 3,076 budgets, were collected. About half the budgets referred to cotton mill workers, the remainder being budgets of municipal workers, dock labourers, and railway and engineering workers. The average working class family consisted of 4·2 persons, viz., 1·1 men, 1·1 women, and 2·0 children under 14, exclusive of '6 dependents

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living away from the family. The average earnings of the family per mensem of all the 2,473 families were Rs. 52-4-6. If we include average earnings in the 603 single men's budgets (Rs. 43-10-3 per mensem) the average earnings of men for the total of 3,076 budgets drop to Rs. 42-9-6 per mensem. The income of 75 per cent of the families for which budgets were collected ranged between Rs. 40 and Rs. 70 per mensem. How was the income spent? The percentage expenditure on the main groups was as follows:—

Food	..	..	56·8	per cent.
Fuel and lighting	..	..	7·4	„
Clothing	..	..	9·6	„
House-rent	..	..	7·7	„
Miscellaneous	..	..	18·5	„
				100·0
				„

Thus more than half the total family income was spent on food. The percentage of expenditure on food was found to decrease as the income increased, thus confirming Engels' Law. When these results are compared with the results of similar enquiries in other countries it is found that the proportionate expenditure on food in countries with a high standard of living, as the United States, the United Kingdom and Australia, is lower than in India.

The quantity of food consumed by the industrial workers in Bombay was insufficient. "The general conclusion," says the report, "is that industrial workers consume the maximum of cereals allowed by the Famine Code, but less than the diet prescribed in the Bombay Jail Manual." The following table shows the daily consumption of cereals and other articles of food per adult male in lbs. as arrived at from 2,473 budgets of working class families in Bombay, and the jail allowance:—

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		2,473 FAMILY BUDGETS.	BOMBAY JAILS.	
Articles.	lbs.		Hard labour, lbs.	Light labour, lbs.
Cereals ..	1'29		1'50	1'38
Pulses ..	'09		'27	'21
Beef and Mutton ..	'03		'04	'04
Salt ..	'04		'03	'03
Oils ..	'02		'03	'03
Others* ..	'07		..	..
TOTAL	1'54†		1'87‡	1'69

It is a remarkable fact that workers in one of the leading Indian industries did not get more cereals to eat than the famine allowance for diggers and that they actually got less than the jail allowance for prisoners. "The standard of comfort," says the report, "is not high. The necessities for efficiency are not as great as they ought to be."

As regards fuel and lighting, working class families do not use gas or electricity; kerosine and wood represent the whole expenditure under this head. The expenditure on clothing was found to be particularly low in the lowest income class (below Rs. 30 per mensem), and it is a cause of indebtedness. As regards housing, 97 per cent of the working class families whose budgets were tabulated were living in overcrowded single rooms.

The working class families, except the highest income class, spent practically nothing on education. At least 4 per cent of the total expenditure was accounted for by drink—the percentage was higher in the case of some classes. The consumption of liquor by the industrial population had increased, and this was probably connected with the conditions under which the industrial workers lived; 47 per cent of the working class families were found to be in debt.

* Includes sugar, tea, milk and ghee (clarified butter).

† Exclusive of sweetmeats, condiments, spices, vegetables, fruits, fish, refreshments, and other food for which no estimates were available.

‡ Exclusive of onions, condiments, vegetables and tamarind.

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The annual rate of interest paid was one anna in the rupee per mensem, or 75 per cent per annum.

THE LABOUR COMMISSION'S INVESTIGATIONS

The Labour Commission collected statistics bearing on the income and expenditure of working classes in different parts of the country. They considered the material "inadequate as a basis of any complete treatment of the worker's ills," but the material is still valuable. It may be doubted if any great rise has occurred in the income or standard of living of the industrial worker since the Labour Commission reported.

Cotton Mills.—There are considerable variations in wages. In Bombay the average earnings of two-loom weavers in 19 selected mills varied between Rs. 1-9-1 and Rs. 2-1-6 per day. The variations were greater in Ahmedabad. The average monthly earnings of Bombay operatives and the percentage and average earnings of operatives who worked without any absence are shown below:

Group	Average monthly earnings of all workers.	Percentage.	Workers who worked without any absence:		
			Average monthly earnings.		
	Rs. as. p.		Rs.	as.	p.
39. Men	.. 37 10 2	53	44	3	6
Women	.. 17 12 4	33	20	4	6
Children	.. 5 10 4	36	6	13	10

These figures are lower for Ahmedabad and much lower still for Sholapur.

In the Madras Presidency wages of weavers in cotton mills were officially reported to be about a rupee, and for male spinners about 10 annas a day; the monthly wages of male weavers in the United Provinces were reported to be Rs. 33, and of male spinners Rs. 25. Punjab, Delhi and Bengal showed higher rates.

Jute.—Wages in the jute mills of Bengal in different departments, varied between Rs. 4-5-3 (batching) and Rs. 9-8-0 (sacking weaving), for 60 hours' work.

Engineering and Metal Industries.—Wages were highest in Bombay, and lowest in Madras, Bengal, Bihar and Orissa and the United Provinces. Masons in Bombay may earn (monthly) Rs. 50—70, carpenters and blacksmiths Rs. 60—75, and fitters and turners Rs. 65—80. In the provinces named, where wages are lowest, the average monthly earnings of masons were about Rs. 30, of carpenters about Rs. 35, and of blacksmiths, fitters and turners about Rs. 40. Wages in C. P., Burma, the Punjab and Delhi were somewhere between the two extremes.

Seasonal Factories.—In the Punjab the rates reported were 8 annas a day for men and 6 annas a day for women. Rates in Madras and the United Provinces were about the same. In the Bombay Presidency the rates were higher and showed considerable variations in different districts.

Mines.—The Commission estimated the average monthly earnings of a coal-cutter at about Rs. 10 to 15. In numerous quarries the daily wage varied between 5 annas and 8 annas for men and 4 annas to 5 annas for women.

According to the report of the Chief Inspector of Mines in India the average daily number of persons working in and about the mines regulated by the Indian Mines Act was 269,593 in 1936, of which 162,917 were employed in coal mines. The average daily earnings of skilled and unskilled labour working underground in Jharia and Ranee-gunj coalfields were 9 as. and in the Punjab coalfields 11 as., for surface workers, the average daily earnings in Jharia and Ranee-gunj were Re. 0-5-9 and in the Punjab coalfields Re. 0-9-3.

Dock Labourers.—The Bombay Port Trust put the average monthly earnings, including payment for overtime, of dock labourers in its employ at about Rs. 32. In Calcutta the average monthly earnings of stevedore labour were estimated to be about Rs. 20.

Unskilled Labourers.—The Commission found that while the unskilled labourer in towns earned "appreciably more than the

agricultural labourer,"⁶ his earnings were usually low. In the industrial centres of Burma and Bombay the rate for men was above 12 annas; it was less than this in Delhi and the Punjab. In Bengal, Bihar and Orissa and parts of the Central Provinces the daily rates were roughly 8 annas for men, 6 annas for women and 4 annas for children.

Family Income.—The Labour Commission's analysis of family income is based on two investigations made into family budgets in Sholapur and Ahmedabad by the Bombay Labour Office in 1925 and 1926. The average monthly expenditure was Rs. 37-13-11 in Sholapur and Rs. 39-5-8 in Ahmedabad. Food, fuel and lighting, clothing and house rent accounted for over 82 per cent of the total expenditure in Sholapur and for 85 per cent in Ahmedabad. "These facts," write the Commission, "are best left to speak for themselves, and it is unnecessary to emphasize the general poverty they disclose."⁷ The Commission emphasized the need for improvement in this respect, for poverty of the worker reacts on his efficiency: "Thus poverty leads to bad conditions, bad conditions to inefficiency, and inefficiency to poverty. We believe in attempting to break the vicious circle at as many points as possible. There must be an endeavour to enhance efficiency, to heighten earnings and to improve the conditions of life."⁸

The vicious circle, however, cannot be broken by prescribing minimum wages in all industries. The Commission (as we have seen) recommended the guaranteed payment of a standard minimum output in the case of underground workers in coal mines. Even this is not equivalent to a minimum wage, as the rate of payment has been left unregulated.

Indebtedness.—The Commission estimated that in most industrial centres the proportion of families or individuals who were in debt was not less than two-thirds of the whole. They believed that in the great majority of cases the amount of debt exceeded three months' wages, and was often far in excess of that amount.

⁶ Report, p. 203.

⁷ Ibid., p. 207.

⁸ Ibid., p. 208.

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The rates of interest were high, in some cases even 150 per cent or more per annum! The Commission were impressed by the number of cases in which an industrious worker was obliged to curtail his expenditure on necessities to meet interest charges "without the faintest prospect of being able to reduce the principal."⁹ They made a number of recommendations regarding the attachment of wages and salaries and imprisonment for debt, which are being examined by the central and provincial Governments. Their recommendation for the reduction of the period of limitation for debts and the period within which a decree may be kept alive has however not been accepted by Government. The Government have decided that "no change in the existing law is called for."¹⁰

✓ *Wages in Assam.*—On tea plantations, the cash earnings of the worker are supplemented by certain concessions: free housing, medical facilities, firewood, free grazing for cattle, and land for cultivation. But the Commission found that few gardens could offer a holding of any size to the majority of the workers; the remaining concessions were of still less importance. The Commission emphasized the importance of cash wages, but the cash wages were low. The average monthly earnings in the Assam Valley (1929-30) were Rs. 13-8-7 for men, Rs. 11-1-7 for women and Rs. 7-8-6 for children, calculated on the assumption that the worker was not absent on a single working day.

✓ There are powerful organisations of employers in Assam, and wages are, in effect, determined by the joint action of the employers. There are no unions of tea coolies, who are illiterate, speak many different languages, come from different parts of India, and live and work in the comparative isolation of plantation life. "Workers in such a position," concluded the Labour Commission, "stand in special need of protection," and they recommended the introduction of wage-fixing machinery in Assam.

✓ Any impartial reader of the Labour Commission's Report would agree with this conclusion. But Sir Victor Sassoon, a

⁹ *Ibid.*, p. 226.

¹⁰ *Second Report*, loc. cit., p. 16.

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member of the Commission, expressed his dissent in a separate note.*

Both in their written statements, and in the evidence tendered by them the representatives of the tea-industry opposed statutory minimum wages. The Indian Tea Association wrote: "As so few labourers work the full number of days it is considered that the statutory establishment of a minimum wage is unnecessary and would be difficult to enforce."¹¹ The Darjeeling Planters' Association described the proposal as "unnecessary and inadvisable."¹² The Indian Tea Planters' Association, Jalpaiguri, considered it absolutely unnecessary.¹³ Mr. J. Insch, Chairman of the Indian Tea Association, Calcutta, in his oral evidence said that they had already so fixed their piece-rates as to yield an ordinarily diligent coolie not less than a given amount per hour. The Commission failed to understand why, if most of the members of the Tea Association were already doing it, as a body they objected to the fixation of a minimum rate which would bring the worst gardens up to the level of the others.¹⁴ It was pointed out to the Chairman that there was no possibility of collective bargaining as between the tea garden coolies and a body of managing agents as Mr. Insch's Association (i.e., the coolies' employers). Mr. Insch replied that the Tea Association was not primarily concerned in the matter—"so any bargaining will be as between the coolies and the managers."

Q. F. 2947. "What I am asking is whether you as an Association consider that there is any real possibility of collective bargaining between even your managers and the tea garden coolies in their present state of education?"

The incredible reply of the Chairman of the Indian Tea Association was "I think so"!

* "If the Assam tea-industry could have been classed as 'sweated' industry, this exceptional treatment might have been justifiable: but, as facts are, it seems to me that the proposed imposition of Minimum Wage Boards would be an act of injustice to a trade in which the worker, according to the Local Government, "can already earn enough to keep him in health and reasonable comfort." (P. 485 of the Report).

¹¹ *Assam Evidence*, p. 75.

¹² *Ibid.*, p. 85.

¹³ *Ibid.*, p. 93.

¹⁴ *Ibid.*, Question F. 3943—47.

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If practicable, the Labour Commission considered the establishment of statutory wage-fixing machinery in the Assam plantations desirable, and they had good reasons to believe that if proper methods were adopted, a practicable scheme could be devised.

It is extremely doubtful if such a scheme would ever be devised—none has been devised so far.*

Attention may be drawn to two recent investigations into wages and conditions of labour in the engineering industry and the textile industry in the Bombay Presidency. The wage data for the engineering industry relate to 221 engineering concerns and 471 others and the total number of employees covered is over 75,000. The average monthly earnings for all workers in six of the important graded occupations in all factories (May 1934) are given below:

			Rs.	as.	p.
Moulders	..	..	41	10	3
Blacksmith	..	..	50	6	0
Fitters	..	..	53	4	9
Machinist, turners	..	..	51	1	4
Carpenters	..	..	39	9	0
Painters	..	..	40	3	2

Including both skilled and unskilled workers, the average daily earnings come to Re. 1-11-4 and the average monthly earnings to Rs. 39-3-10. Excluding unskilled labourers, the average daily and monthly earnings for the Presidency are Re. 1-14-5 and Rs. 43-14-5.

The average wages both for skilled and unskilled workers are considerably higher in the engineering industry than in other industries.

* We learn that an officer was deputed to Ceylon to acquire experience of the working of wage-fixing machinery there. His report has been received and considered by the Assam Government. "The existing wage-statistics, however, do not supply adequate material regarding the rates of remuneration owing to the lack of correlation between the earnings of the worker and his hours of work. The Government of Assam, therefore, propose to prescribe new forms of wage returns under section 37 (2) of the Tea Districts Emigrant Labour Act, 1932, (which came into force from 1st October, 1933). This will be done in consultation with the Controller of Emigrant Labour after he has acquired some practical knowledge of conditions on tea estates in different parts of the Province." (Second Report, loc. cit., p. 106).

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The second enquiry was carried out by the Textile Labour Enquiry Committee appointed by the Government of Bombay in Oct. 1937. The committee recommended a 12 per cent rise in wages. They based this demand on the prosperous condition of the mill industry due to (1) decline in the imports of piece-goods, (2) recovery of the home market, (3) expansion of exports and (4) increased efficiency of production. The committee were of the opinion that the present improvement in the industry is not of a temporary nature and that progress will continue. Assuming the wages bill to be 22·5 per cent of the total cost of production, they found that within the available surplus (due to the fall in the price of raw cotton) the recommended increase in wages could be given. The increments are to be granted according to a sliding scale—nothing to those earning Rs. 75 monthly or over and increments varying from 1 anna in the rupee to 3 annas in the rupee in the case of those earning less.)

WAGES IN INDIA AND RUSSIA

Wages of industrial workers in India are low, much lower than wages in industrially advanced countries as the United States or England, or even Nazi Germany. But incredible as it may seem, the purchasing power of the average Indian factory worker is not much smaller than that of the average factory worker in socialist Russia, which is industrially more advanced than India.

The following rates of wages in roubles are quoted by Sir Walter Citrine (*I Search for the Truth in Russia*, p. 388). They are based on official Russian sources:

AVERAGE MONTHLY WAGES IN U. S. S. R.

	Roubles.	Equivalent in Rs.
Transport ..	283·5	35·4
Heavy Industry ..	280·5	35·1
Light Industry ..	196·5	24·6
Food Industry ..	201·0	25·1
Timber Industry ..	198·0	24·8

Officially 26 roubles are equal to one £, but in purchasing power a rouble is equal to about 3d. (*Sir Walter Citrine*, p. 142). When Russian prices are compared with Indian, it is found that

the purchasing power of a rupee is greater than that of 8 roubles (see *Marxism is Dead* by the present writer, Chapter V).

The 'socialised' wage in Russia is about one-third of the money wage. But probably only about half of the 'socialised' wage is real. Then, deductions from the wages, including 10 per cent monthly loan to the State, which is, in fact, compulsory amount to 15-21 per cent of the wages. The 'socialised' wage and the monthly deductions cancel each other out (*Marxism is Dead*, Chapter V).

In the engineering industry, average earnings in all occupations in the Bombay Presidency, allowing for percentage attendance, as we have seen, amount to more than Rs. 39 a month, while the average monthly earnings of six of the important graded occupations, moulders, blacksmiths, fitters, turners, carpenters and painters, range between Rs. 40-3-2 and Rs. 53-4-9. The average wage in the Bombay engineering industry is higher than the average wage in the best paid Russian industries, considering the purchasing power of wages in the two countries.

According to the general wage census of May 1934 (Part I, Third Report, p. 129) the average daily earnings of men operatives on time rates in all occupations in the cotton textile industry in the Bombay Presidency amounted to Re. 0-15-7 daily, say about Rs. 25 monthly. Allowing for the 12 per cent increase in wages granted in 1938, the purchasing power of the average textile worker in cotton mills in the Bombay Presidency is probably greater than that of the average worker in light industry in socialist Russia.

That the standard of living of Russian workers is extremely low is also shown by the fact that in 1935, 67·3 per cent of the family income was spent on food alone (De Basily, *Russia under Soviet Rule*, p. 377). This may be compared with 56·8 per cent for Bombay workers according to the family budgets examined in 1921-22. According to Bombay working class family budgets collected in 1932-33, the percentage expenditure on food had fallen to 46·60. The percentage expenditure on food in Ahmedabad working class family budgets was 57·90 in 1926 and 49·31 in 1933-35 (see *Report on an Enquiry into Working Class Family Budgets in Ahmedabad*, Bombay Labour Office, 1937, p. 33).

INDUSTRIAL LABOUR

INDUSTRIAL DISPUTES IN INDIA

The following statement gives relevant information about industrial disputes in India from 1921 to 1937:¹⁵

		No. of dis- putes in progress.	No. of work people involved in 1000.	No. of working days lost in 1000.
1921	..	396	600	6,984
1922	..	278	435	3,972
1923	..	213	302	5,052
1924	..	133	312	8,731
1925	..	134	270	12,578
1926	..	128	187	1,097
1927	..	129	132	2,020
1928	..	203	507	31,647
1929	..	141	532	12,166
1930	..	148	196	2,262
1931	..	166	203	2,408
1932	..	118	128	1,922
1933	..	146	165	2,169
1934	..	159	221	4,776
1935	..	145	114	973
1936	..	161	169	2,358
1937	..	379	647	8,982

The four years of depression were, comparatively speaking, years of industrial peace. The total number of disputes between 1930 and 1933 was 578, involving 692,000 work people. The number of disputes in the four most peaceful years 1923—27, was less, 524, but the work people involved in these disputes were 901,000.

As compared with our 146 disputes in 1933, the number of industrial disputes in United States averaged 130 per month in 1933. The United States has, of course, more industries, and more dissatisfied workmen. But the depression has been a period of progress and development for Indian manufacturing industries

¹⁵ *Bombay Labour Gazette*, May 1934, p. 690.

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on the whole. It has not the same meaning for American or European industries.

The number of disputes suddenly rose in 1937 to 379, involving 648,000 work people and a loss of about 9 million working days. Disputes were most frequent in Bengal (jute mills). Of the total number of disputes in the whole of India, 234 were concerned with ^(bonus)wages and 73 with personnel. Out of 366 disputes in which settlements were arrived at during the year, in 168 or 45.9 per cent, the workers were successful in gaining concessions. In 51 or 13.9 per cent of the disputes they were completely successful and in 117, or 32 per cent of the cases only partially successful.

TRADE UNIONS

- a continuous association of employees.

Mr. N. M. Joshi, of the Servants of India Society, moved a Resolution in the Legislative Assembly in March, 1921, recommending the enactment of legislation for the registration and protection of Trade Unions. The Trade Union Act was finally passed in March, 1925, and came into force on 1st June, 1927. A Trade Union has been defined in the Act (which is still in force) as "any combination, whether temporary or permanent, formed primarily for the purpose of regulating the relations between workmen and workmen, or between employers and employers, or for imposing restrictive conditions on the conduct of any trade or business." The definition includes any federation of two or more Trade Unions.

The registration of Trade Unions is not compulsory, but any seven or more members of a Trade Union may, under certain conditions, apply for the registration of the Trade Union under Act.

The two chief features of the Act are the principle of immunity in respect both of civil and criminal proceedings against a Trade Union, and the constitution of a separate fund for political purposes. Only registered Trade Unions will benefit by the legislative recognition of the principle of immunity.

✓ Strikes are legal - the strong leaders organised strikers, could not be victimised.

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From the political fund payments may be made "for the promotion of the civic and political interests" of the members of a Trade Union. This includes payment of any expenses incurred, either directly or indirectly, in connection with the election of candidates as members of legislative bodies or their maintenance, and the holding of political meetings of any kind, or the distribution of political literature or political documents of any kind.

It is also provided that not less than one-half of the total number of officers of every registered Trade Union shall be persons actually engaged or employed in an industry with which the Trade Union is connected. The object of this provision is to prevent a Trade Union from passing under the control of outsiders.

The revision of the Act of 1926, in accordance with the recommendations of the Labour Commission, must be now under consideration. It is to be hoped that the conditions attached to registration will be made easier.

The Commission recommended that all unions should be able to secure free of charge the conduct of their audit by Government officials. Local Governments were generally opposed to the adoption of this recommendation on account (among other things) of financial stringency, but effect has been given to it in Madras, C. P., the Punjab and presumably also Delhi. There were two other important recommendations of the Labour Commission, viz., that a registered trade union should not be precluded from initiating and conducting co-operative credit or supply societies, and that ordinarily not less than two-thirds of the officers of a registered trade union (and not one-half as at present) should be actually engaged or employed in an industry with which the union is concerned. The Government view the latter recommendation with favour; on the other recommendation they have decided to take no action, holding that members of a trade union can, under the existing law, form themselves into a co-operative society with a separate constitution.

In the year 1935-36 there were 236 trade registered unions in British India of which 205 submitted returns. The total number of members was 268,000. The unions had a balance of

about Rs. 6 lakhs at the end of the year. Bengal had the largest number of unions, 69 (members about 81,000), followed by Bombay 50 (members about 52,000), Madras 32 (members 22,000) and Punjab 30 (members 64,000). The number of registered unions in India in 1927-28 was only 29, with a membership of 101,000.

Of the total number of members in 1935-36, 150,000 were railway employees, about 27,000 textile workers and about the same number seamen. The number of women members was only 7,309.

There were during the year only 3 unions with a membership of 20,000 and above.

The actual income of unions from subscriptions is much less than what it should be according to the number of members.

Fuller information is available about unions in the Bombay Presidency. At the end of Sept. 1938 Bombay had 147 unions with a membership of 135,000. In this province the trade union movement has made rapid progress during the past 11 years—in 1927 there were 66 unions with a membership of 79,000. The number of registered unions, however, at the end of Sept. 1938 was only 53 out of 147. The trades represented in the unions are textile, railways, posts and telegraphs, port trust and docks, match factories, tramways, press workers, clerical and others. The number of organised textile workers is 51,000.

The Labour Commission emphasized the need for the development of trade unions: "It is in the power to combine that labour has the only effective safeguard against exploitation and the only lasting security against inhuman conditions." The difficulties of industrial labour are many: (1) the migratory character of the bulk of Indian labour, (2) poverty of the worker, (3) differences of language, (4) social and communal differences, and (5) ignorance, greed and utter incompetence of many so-called labour leaders, who are very often prepared to sacrifice the interests of labour for selfish ends. In the Punjab interested parties have split up unions on the communal issue. Economic interests of workers

of different communities are essentially the same, but not the interests of communal leaders.

Perhaps the greatest obstacle to the growth of the movement, in some provinces at any rate, is religion.

At a special session of the All-India Trade Union Congress, held at Nagpur in April 1938 the President complained that the membership of the unions had fallen and that 'the trade union movement all over India was at its lowest ebb.' Efforts are being made to unite different wings of the movement. A factor which has led to the renewal of the efforts for unity is the formation of Congress Ministries which has 'awakened in the hearts of trade union leaders the hopes of winning trade union rights and the minimum demands of the workers.'

CHAPTER VIII

EDUCATED UNEMPLOYMENT

No statistics of the unemployed are available for India. The Bombay Labour Gazette reviews the 'employment situation' every month. The review only gives the percentage of absenteeism in certain industries at certain centres. In Nov. 1938, for example, the average absenteeism in the textile industry in five important textile centres of the Bombay Presidency amounted to 6.75 per cent. The supply of labour was reported as adequate for a large majority of the Bombay mills, the average absenteeism amounting to 8.52 per cent. In the engineering industry in Bombay City the average absenteeism amounted to 12 per cent in the same month.

The percentage of absenteeism is not the same thing as the number of the unemployed or the proportion of the unemployed to those in employment.

But industrial unemployment in India is of comparatively small importance. India is not an industrial country and, as we have seen, the great majority of our workers are not factory workers.

✓ Hand-workers and the great majority of agricultural workers are not employees, since they work on their own account. They are not fully employed; the problem of under-employment in cottage industries and agriculture is not the unemployment problem as the term is used in Western countries. Unemployment or under-employment in agriculture is seasonal; there is also the growing pressure of population on the soil. Unemployment in cottage industries is due to machine competition.

The term unemployment may be properly used in respect of the products of our schools and universities. Educated unemployment is principally due to the fact that our system of education is not related to practical life.

✓ In regard to methods and aims of education India may learn

even from Fascist Italy. Fascism has transformed Italian education. Fascism despises culture which is purely ornamental. It values that culture alone which "arms and fortifies the spirit for conquering new battles".* Fascist education is practical, not merely theoretical. Giovanni Gentile, whose name is associated with the reform of the Italian system of education, says:

"Fascism is a war against Intellectualism. The Fascist spirit is Will; it is not Intellect—Fascism fights, and should fight ceaselessly and pitilessly not Intelligence, but Intellectualism, which is the disease of Intelligence". The distinction between Intellectualism and Intelligence is of some significance. Intellectualism is barren. It is mental training for its own sake. Intelligence consists in applying the intellect to the solution of problems of life.

In Russia education has been made wholly subservient to economics. Educational planning was a part of the First Five Year Plan. The success of the Plan in making Russia an industrial country, producing her own technical equipment, depended on the development of technical education.

Everything was therefore done to spread technical knowledge. The country has been covered by a net-work of technical colleges and polytechnics. According to a critic of Bolshevism, "Education no longer aims at producing an educated man. Its object is to turn out an officer in the proletarian army, capable of taking an active part in the civil service, industry or finance."²

It cannot be said that the Indian system of education is aimless. "In its very inception", wrote a Director of Public Instruction, Punjab, "it was moulded with the special object of preparing boys for external examinations," the object being the training of boys "for clerical vocations which are now proclaimed to be over-stocked and which offer insufficient avenues of employment to the large throng of applicants."³ In this sense our system of education has survived its usefulness. The supply of clerks much exceeds the demand for them either in Government or in private offices.

* *Che Cosa è il Fascismo*, p. 98.

² *Theory and Practice of Bolshevism*, by W. Gurean, p. 154.

³ *Report of Punjab Committee on Unemployment*, p. xi.

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The problem of educated unemployment was the subject of investigation by special committees, appointed in several Provinces. The University authorities in the Punjab took the view in 1927 that there was 'probably' some unemployment among graduates (especially those of inferior quality) and 'much' unemployment among matriculates and failed matriculates. The Punjab Committee was led by the evidence tendered before it to the conclusion that there was 'extensive' unemployment among educated classes, meaning by that term those who have received a purely literary Anglo-Vernacular education. The conclusion of the Madras Committee was the same. It found unemployment among graduates without professional qualifications, and more unemployment among Intermediates, S. S. L. C's. and failed S. S. L. C's.

The following statement shows the progress of education in India:

	1911-12	1920-21	1935-36
No. of schools ..	130,030	108,270	212,086
No. of scholars, 31st March	5,919,000	7,583,000	12,731,000
High stage (middle passed),			
No. of scholars ..	142,000	219,000	414,000
No. of under-graduates ..	9,319	55,395	88,715
No. of graduates ..	4,242	9,814	19,040

Rapid increase in numbers

1. Between 1911-12 and 1935-36 the number of the middle passed increased about 3 times, of under-graduates about 9 times and of graduates $4\frac{1}{2}$ times.

In view of the rapid growth in the number of matriculates, under-graduates and graduates, it is not surprising that educated unemployment has attained serious dimensions. Striking examples of keen competition for jobs are given in the report of the Madras Committee on unemployment. A test advertisement in the newspapers for a clerk's post under the Government carrying a salary of Rs. 35 per mensem brought in 666 applications (including 30 from graduates). No less than 787 applications were received in response to a similar test advertisement for a clerk's post in a commercial firm in Madras.

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Certain professions (notably that of law), are over-crowded. While the number of law graduates has rapidly increased, litigation, on account of the depression, has decreased. Sometime ago, 500 vakils from the Mofussil and the City of Madras applied for the post of bench clerk in the High Court of Madras.

BENGAL

Bengal was the first Province to appoint a committee to examine the problem of unemployment. This committee was appointed in 1922 and its report was published in 1924. It dealt both with the general problem of unemployment, and with educated unemployment.

The Bengal Committee points out that ^{fall in income from land} in former days the middle-class Bengalees were supported largely from income derived from land. Now it is found necessary to supplement this income from other sources. "This has been one of the main causes of the breakdown of the joint-family system and of the gradual flow of the educated middle-classes from villages to the town" (p. 11). The cause of the trek into towns may be the desire for a higher standard of living, the attractions of town life, or the growing pressure of population on the soil, but the fact remains that those who have left the villages for towns, will gain very little by returning to the villages now. 2

Nor is it possible to check immigration from lower classes into the Bhadrakok class. "For a period", explains the Committee, "the educated middle class Bengali doubtless flourished." Other classes wished to emulate him. They arrived late and have missed the rise, but they will take the downward swing lower than it might otherwise have gone.

The Committee expressed their dissatisfaction with the system of education. It leads to one end only: the M.A., M.Sc., or B. L. examinations. "It is like a bamboo, each joint being an examination and the diameter remaining practically the same size from the root to very near the top. It has no branches and the crowning top covers a very small area." By this simile the Committee meant to illustrate the very limited objective of the system of education, and 3.

its dead uniformity. In introducing the system of education Lord Macaulay had written that "We must at present do our best to form a class who may be interpreters between us and the millions we govern, a class of persons, Indian in blood and colour, but English in taste, in opinions, in morals and in intellect". This class of interpreters duly came into existence, but they are fit to do little else than interpreting. Further, our universities continue to produce the class of interpreters even when there is not enough interpreters' work for all members of the class. As the Committee wrote: "And the most depressing thought of all is that the process is still going on and any modification even in the near future will not become effective for many years to come" (p. 15).

340 The Committee admitted the charges commonly brought against the system of education: it bears no relation to the everyday life of the student; it destroys his adaptability; it leads from one examination to another offering on the way no points of natural divergences; and, finally, in the case of a large proportion of students, it does not lead to any means of earning a livelihood.

The recommendations of the Committee covered a wide field. ✓ It laid emphasis on the need for encouraging the economic development of the country: "The mere provision of facilities for technical training may help for a little time, but it will not solve the problem unless at the same time an economic development takes place, be it spontaneously or with external assistance" (p. 15).

A. 2. With this necessary qualification the Committee favoured the ✓ immediate adoption of a comprehensive scheme of technical education with the object of producing industrial workers of various classes, such as managers, foremen, supervisors and workmen. A Board of Technical Education was to be established for the control of training, both theoretical and practical, for industry and commerce. Among other things the Board was to undertake the duties of estimating and publishing the prospects of employment in various occupations, prescribing courses of training to be followed to enter such occupations, and furnishing assistance to trained men in finding employment through the establishment of an employment bureau for those who had been trained according to the prescribed standards.

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The Committee considered that ordinary high school education in the last two years should be divided into two groups, (1) literary, and (2) scientific, and that each student should make a definite selection. When the students arrived at the University Matriculation stage, all were not to take that examination. Some from the literary side could take the examination of the Board of Control of Technical Education referred to above and, if successful, pursue a training leading to employment in commerce; some from the scientific side could take the appropriate examinations of the Board and proceed to a technical training leading to employment in industry.

In regard to the economic development of the country the Committee pointed out that agriculture was the main support of the population. "In our opinion," they wrote, "what is required therefore is the intensive development of agriculture and of the industries associated with agriculture." (p. 22). They recommended agriculture as a profession for the Bengali Bhadrak. It was also desirable to make experiments in cattle-breeding, dairy-farming, poultry farming etc., as occupations for Bengal Bhadrak (among other things, the Punjab Committee on unemployment recommended rose-growing and tobacco-cultivation as new occupations for Punjabee Bhadrak). Further, the Committee recommended the expansion of co-operative activities in directions other than the provision of credit: provision of seed, manure, implements, irrigation, water, cattle, yarn, looms and power. Co-operative production and sale were also to be encouraged.

UNITED PROVINCES

In the United Provinces Legislative Council, when, in August 1929, a resolution was moved recommending the appointment of a Committee to suggest ways and means to alleviate unemployment among the educated middle-classes, the Government opposed the motion on the ground that the "appointment of a Committee was unnecessary in view of various measures for provincial development which they had taken". Eventually the resolution was accepted by the Government, and the matter referred to the provincial Deve-

lopment Board. The Board was "greatly impressed" by the magnitude and complexity of the problem, and recommended the appointment of a special Committee to deal with the question. A departmental Committee was finally appointed in November 1927.

The Committee found that the causes of educated unemployment were "not one but various", having their roots in the social and economic system of the Province, or arising from its physical characteristics and its past history, or "due to errors of policy in the past". Some of the causes were connected with the period of "change and rapid transition" through which the country was passing. But one thing was clear: the supply of educated men was greater than the supply of suitable posts. Government service and the legal profession were the main occupations of the educated classes. The legal profession was over-crowded, and as for Government service, it could not absorb more than about one in five of those who passed the high-school examination.

Can more jobs be created for educated men? The Committee made two suggestions. First, educated young men should be induced to take up trades and occupations which they have so far neglected, and assisted to create new ones. Secondly, measures may be adopted to expand the prosperity and productive power of old occupations. "One process starts with the man, we may call it 'tuition'. The other starts with the occupation, we may call it 'development'; but they are really opposite aspects of the same thing. Development means increased production, and so more to divide, and higher earnings for the educated man" (p. 7).

The two direct sources of wealth production are agriculture and industry. The Committee took the view that no solution of the problem could be found in attempts to settle educated men, unconnected with agriculture, on the land. Already three out of four of the inhabitants of the United Provinces were dependent on agriculture for their livelihood. The Province "is already one of the most closely cultivated regions in the world". Excepting jungly areas, every square yard of land which was capable of cultivation was already tilled. However the Committee recommended that efforts should be made to keep the educated young

EDUCATED UNEMPLOYMENT

zamindar or prosperous tenant's son on the land. This may be done by showing him how he can make agriculture more profitable, by imparting an agricultural bias to the education given in rural areas, by improving the amenities of village life (both cultural and hygienic), and by developing new sources of livelihood in the collection and sale of agricultural products, upkeep of machinery (*i.e.*, power-driven tube-wells, cane-crushers etc.) and in the better organisation of rural co-operative effort.

It appears that agriculture in the United Provinces cannot provide much room for the educated unemployed. It is desirable to keep the sons of zamindars on the land, provided they can earn something for themselves there. But even in 1927, that is before the catastrophic fall of prices, agriculture had ceased to be a remunerative profession for educated young men:

"A boy of the cultivating classes no sooner gets a little education than he is off to the town to try to get a job as a clerk on Rs. 15 or Rs. 20 per mensem. The reason is sometimes a faulty kind of education. But it must quite as often be the fact that such a post gives him in pay as well as in amenities what his ancestral holding could never give him even though he were to apply to it all the latest devices and methods, and farm it with the utmost skill" (p. 6).

Considering the existing heavy pressure on the land and the recent fall in agricultural income it would be still more difficult to induce the sons of agriculturists to stay on the land.

What are the chances of increased employment of educated men in industries?

It has been estimated that an investment of a crore of rupees in factory industries creates employment for about 500 men for direction and supervision. In this sense jobs for educated men depend on the amount of capital available for investment in industry (assuming, among other things, that adequate supplies of skilled and unskilled labour are available). There is capital in the United Provinces, labour is cheap and abundant, and raw material for manufactures, based on agricultural or forest produce, is not lacking. But the Province is handicapped by the complete absence

of coal, oil, or other mineral wealth. The introduction of cheap hydro-electric power into the Western districts of the Province may remove this handicap.

Under existing conditions factory industries in the United Provinces offer no hope of increased employment to educated men. "The existing posts are already filled, and it is only wastage that has to be provided for" (p. 14).

The cottage industries, in which there is some room at present are: tailoring, laundry work and dry-cleaning, tomato-canning, bee-keeping, the manufacture of wooden and leather goods, matches (as a cottage industry), candles, cane basket-ware, woollen blankets (hand-loom), card-board boxes, pen-nibs and other small metal articles, hosiery, envelopes, buttons, jams, lac-varnishes and dyes, glue, and confectionery. But educated men taking to these occupations will have first to compete with more skilled professional artisans, and secondly, to face the competition of machinery. The market for the products of these industries is not very extensive, and as machine competition increases, it must shrink. Technical education in industrial schools, whose object is to train hand-workers for cottage industries, wrote the Committee, "is not the panacea for the unemployment problem which it is often alleged to be"—a sound observation. It follows that cottage industries provide no solution of our problem, but only relief for a very short period, and on a very limited scale.

The Committee recommended the establishment of employment bureaux in a few centres with the following chief objects, (a) to maintain a register of middle-class students wanting jobs, (b) to ascertain openings for employment for them, (c) to bring them into touch with employers, and (d) to give advice and information to parents about careers for boys.

PUNJAB AND MADRAS

The aim of education in the Punjab, as in other Provinces, is Government service. Very few care for knowledge for its own sake. Government service is preferred for various reasons: (a) emoluments of Government servants, (b) prestige or *izzat* of

officials, (c) security and regular promotion in Government service "and no particular need for efficiency."⁴ Another interesting reason was mentioned by a witness in his evidence before the Punjab Committee: "At present an average zamindar thinks rightly or wrongly that he can save himself from every-day insults heaped upon him by Government officials by taking some sort of Government service and leaving his ancestral profession."⁵ Finally, Government service is the principal source of employment for educated young men; other avenues of employment are few.

It is obvious that the ranks of the unemployed are swelled by half-educated boys and young men drawn from many classes whose ancestral occupation is different. It is stated that education renders boys unfit for their ancestral occupations e.g., agriculture and cottage industries. There is a growing aversion from manual labour among certain classes. Having attended school or college, the son of a zamindar considers it beneath his dignity to touch a spade or a plough.

Among special causes of unemployment the Madras Committee mentions caste, early marriage, joint family and communal inequalities or social disabilities. Early marriage burdens a young man with responsibilities at an immature age. Caste restrictions interfere with the mobility of labour: a caste Hindu may not follow certain occupations. The joint-family encourages laziness and parasitism.

These causes are of little importance. The age of marriage is rising, but by itself it will have little effect in reducing unemployment or increasing the number of jobs. Not would unemployment be much reduced by caste-Hindus taking to 'untouchable' occupations. The joint-family as a defensive economic organisation is of great value in times of hardship. The abolition of the joint-family would in no way contribute to the solution of our problem.

If educated unemployment is chiefly due to the rapid growth of education, a remedy for the evil may be found in reducing educational facilities, or making it more difficult to obtain degrees

⁴ Report of the Punjab Committee on Unemployment, p. 17.

⁵ Ibid., p. 17.

and diplomas. The Punjab Committee recommended this step, at the same time insisting that educational qualifications required for certain Government appointments should be lowered. They admitted that whatever standards were adapted, the number of youths to be recruited for the public services would not be affected. The supply of candidates for Government service would exceed the demand even then, but it is desirable that the requirements of Government service should not unduly lengthen the period of education.

Education must be related to life. "The pupils in the ordinary schools," wrote the Punjab Committee, "should be encouraged to appreciate the dignity of labour, make good use of their spare time and to acquire an earnest spirit of service."⁶

The provision of increasing facilities for technical and industrial education, it is next argued, will enable young men to earn an independent living as producers. The existence of large numbers of trained young men will give an impetus to the development of industries at present non-existent in the Punjab. The Punjab Committee recommended the extension of professional education in certain directions: architecture, pharmacy and conveyancing. Architects will help not only in improving the appearance of buildings, but also in ameliorating health conditions in towns. We also want more trained pharmacists. The drafting of legal documents by competent and trained conveyancers will save a considerable amount of litigation due to inefficient drafting and conveyances.

The Madras Committee saw a general remedy for unemployment in the extension of primary education. If, for example, compulsory primary education were introduced, an enormous demand for teachers would be created. But where is the money for compulsory primary education, or even for a wide extension of primary education to come from?

Both Committees devote much space to a discussion of agriculture in relation to education. The Punjab Committee recommended that small holdings should be provided for educated young men for certain purposes. But it is evident that only a very limited amount of land is available for such a purpose. Some time

⁶ *Ibid.*, p. 23.

ago Principals of Arts colleges at Lahore were asked to recommend six students each for the grant of land for model farming. This is not a solution of educated unemployment, admitting, for the sake of argument, that farms managed by educated young men may serve as a source of inspiration to uneducated cultivators. The Punjab Committese insisted that education should not make a boy unfit for agriculture or create in him a distaste for the life of an agriculturist. From this point of view the Committee emphasized the importance of village 'uplift' work and of encouraging rural sports and pastimes.

The Madras Committee recommended that village life should be made more attractive by starting social clubs and libraries. In rural schools, agriculture should be made the centre of study, and, where possible, a farm should be attached to the High School. The boys must be taught to value agriculture: the idea that agriculture is inferior to the occupation of a clerk, or the profession of a lawyer or teacher must be eradicated. "The example of the King-Emperor and of the present Viceroy (Lord Irwin) should inspire the zamindars of this country to take up farming, cattle and sheep-breeding, and improvement of crops more seriously. The Ministers in South Africa and the leaders of the Opposition are several of them farmers by profession and a majority of them spend their leisure on their own farms."⁷ The Madras Committee makes it absolutely clear that the Government cannot provide jobs for all educated unemployed: "No Government in the world could be expected to furnish all those who come out of schools and colleges with appointments, and in India of the present day, when the educational output is so large and there is a legitimate cry of retrenchment, such an expectation is unreasonable as well as unjust to the tax-payer."⁸ The Committee admitted that no 'heroic remedy' for unemployment existed. No such remedy for abolishing or reducing unemployment was brought to the notice of the Committee or was independently discovered by the Committee.

⁷ *Report of Madras Committee on Unemployment*, p. 25.

⁸ *Ibid.*, p. 24.

The problem was re-examined by a second committee appointed in the United Provinces in 1935 and a second committee appointed in the Punjab in 1938. The report of the latter is still awaited but it is unlikely that the Punjab committee would shed much new light on the causes of unemployment or suggest entirely new methods of dealing with it. The main conclusions and recommendations of the second U.P. committee are summarised below.

Generally speaking, graduates in mining and metallurgy and in chemistry, products of technical institutes and bachelors of commerce are able to find employment. There is much unemployment in the medical profession, due to the tendency of medical practitioners to congregate in big towns. Doctors should be encouraged to settle down in rural areas in larger numbers.

The profession of law is over-crowded. Lawyers may be divided into two classes, counsels who will appear in courts of law and others who will apply themselves exclusively to the drafting of legal documents.

The new professions which may be created or developed are, pharmacy, dentistry, accountancy, architecture, librarianship, insurance work, secretarial work and journalism.

The rules regarding the age of retirement in Government service should be rigorously enforced.

For those who have no connection with land, colonisation schemes possess little attraction. Subsidiary industries as fruit-growing, dairy farming, market gardening, floriculture, seri-culture, poultry, canning, pisci-culture, spinning and weaving, carpet-making, clay-modelling, rope-making, pottery, cattle-breeding, may attract some young men, provided they are adequately trained for the purpose and financed. The Committee favoured a scheme for helping educated young men in starting small industries. Technical education should be encouraged, but at the same time it is necessary to create an agency for establishing young men in the new careers.

The work of these Provincial Committees has shown both the complexity and gravity of the problem of educated unemployment.

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In a sense the solution is easy. If the supply of graduates exceeds the demand, by raising the cost of obtaining Degrees, the number of graduates may be easily reduced. Equilibrium between supply and demand will be thus restored.

If matriculates are unemployed because they have left their ancestral callings, let them return to their ancestral callings. Let them realise the dignity of labour and learn to love agriculture.

But why do young men seek to earn a living through education? Why do they leave their ancestral callings?

The increasing competition of machine-made goods has, in its successive decade, reduced^{each} the proportion of the population dependent on 'Industry'. Industry supported a higher percentage of the population in 1921 than in 1931, in 1911 than in 1921, and in 1901, than in 1911. The development of factory industries has created more unemployment than employment. For ten hand-workers who have lost their occupation on account of growth of imports or Indian machine competition, perhaps one or two have found work in factories. This tendency cannot be reversed by preaching sermons on 'the dignity of labour', or by the opening of industrial schools or technical institutions where hand-workers are trained.

Sons of zamindars and others connected with the land seek education in the hope of entering a more lucrative profession. With the decline of industries the proportion of the population dependent on the land has steadily increased. Agriculture is already supporting too many people, and unless methods of agriculture are radically changed, enabling the yield of land to be enormously increased (which is impossible under the existing system of land-ownership) little is to be gained by increasing the pressure on agricultural resources by settling the educated unemployed on the land.

Further, over large parts of the country agriculture has ceased to be remunerative. At the present time, in the Punjab, which is agriculturally more advanced than other provinces, the peasant does not earn more than 75 rupees a year from cultivation; probably he earns much less. Sons of zamindars seek Government employment because it is better to be a peon than a peasant.

It would be foolish not to follow the example of Ministers of South Africa and leaders of the Opposition, if one possessed estates of 500 acres or more. But when the average amount of land per cultivator is little more than six acres, and net income per acre 10 or 12 rupees, the agriculturist is compelled by dire necessity to seek non-agricultural means of livelihood. No solution of the problem of unemployment is therefore to be found in such devices (however commendable in themselves) as giving a rural bias to education, nature study in villages, development of rural games and pastimes, or increasing the attractions of village life by the provision of social amenities in the shape of clubs and libraries.

We are confronted with a hopeless situation. Year after year we are adding to the number of unemployed matriculates and graduates, destined to lead a life of misery and starvation. Year after year this waste of money and effort must continue. We are presenting to the world the unedifying spectacle of a huge waste of productive power, which, if properly organized and directed, might enrich the country.

There is one and only one solution of the problem of educated unemployment: economic planning. The existing situation is entirely due to *laissez faire* in education.

It may be argued that education is concerned with the formation of character and that it has nothing to do with economic aims or policies.

Even if the chief aim of education is the moral or intellectual perfection of the youth of a country, this aim is not realised by the present educational system. Unemployment degrades young men both morally and intellectually.

In a poor country education cannot be an end-in-itself. Educational ideals suitable for British universities are of little use here.

It is recognized by every one that the present literary education has failed. The advantages of technical education were emphasized by all Committees on unemployment.

But planless technical education will not reduce the number of the unemployed—it may increase them. Before creating technic-

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ians, we must create the industries which will employ them. How are these industries to be created?

It may be argued that our industrial output is expanding. In course of time the existing industries will grow bigger and new industries will be established. The problem of unemployment will thus be automatically solved.

This is an argument for doing nothing at all.

A planned economy for India will aim at industrialising India within a given period. There is at least one example of a country which achieved a miracle in this sense. *Japan?*

Educational planning must necessarily form an integral part of economic planning. Its object will be to use education as a means for augmenting the production of wealth.

The problem of unemployment is easy of solution when the authorities who direct the economic development of a country also control the quantity and quality of technically skilled labour. They know what goods are to be produced and the means of producing them. If the supplies of trained labour are inadequate, they train more labour. Supply is thus adjusted to demand. There can be no unemployment unless mistakes are made in estimating demand, and more labour is trained than is actually needed.

PART II

TRANSPORTATION TRADE TARIFFS

CHAPTER IX

RAILWAYS

The chief matters of interest in connection with railway administration and policy in recent years are (1) the transfer of the East India and the Great Indian Peninsula Railways to State management, (2) the separation of railway finance from the general finances of the country, and (3) the adoption of a policy of Indianisation of railway services.

The question of the future management of Indian railways was considered by the Acworth Committee of 1920-21 but, unfortunately, the recommendations of the Committee on the subject were not unanimous. The President and four of the members recommended State management and the other five members management by Companies domiciled in India. In February, 1923, however, when the question of the future management of the East India and Great Indian Peninsula Railways was debated in the Legislative Assembly, the non-official Indian members were able to carry a resolution recommending the placing of the two lines under State management at the close of their contracts. This has been done, but the policy of State management of railways has not been accepted by Government. The Government view is thus explained in the Railway Administration Report for 1922-23: "The Government of India, however, expressed themselves as being so convinced by the almost universal failure of this method [State management] in other countries that they proposed, while accepting the necessity for taking over the management of the East India and Great Indian Peninsula Railways, to continue their efforts to devise a satisfactory form of Company domiciled in India to take these Railways over eventually on the basis of real Company management" (para 14).

Real Company management is, however, impossible in India. A Company can effectively manage a concern when the money invested is its own and when it enjoys undivided responsibility for management. In the case of the more important lines, however, the

greater part of the capital was found by the Government. The Government is the real owner, and it cannot hand over its property to a Company to be managed as the Company pleases.

Company management under Indian conditions means a division of responsibility which does not make for efficiency. It may be possible to show that Company management has succeeded in other countries and that State management has failed, but there is general agreement in India with the view expressed by the Government of India in a Despatch to the Secretary of State, that there is really nothing to choose between a Company managed line in this country and one under State management."*

Further, Indian public opinion is overwhelmingly in favour of State management, and Indian opinion on such a question is entitled to weight.

The dissenting members of the Acworth Committee mention, as one of the grounds which lead Indian opinion to desire State management, the belief that the employment of Indians in the higher grades of railway service will be better secured under State than Company management. This is not the strongest argument in favour of State management, but still it is an argument which cannot be ignored. On the 1st April, 1924, the percentage of Indians employed on the East India, Great Indian Peninsula and North-Western Railways was as follows:

Percentage of Indians to the total number of		E. I. R.	G. I. P. R. N. W. R. (Government.)	
Officers	..	15·6	11·3	21·2
Subordinates	..	11·4	20·0	36·0

When we remember that it is with money secured on Indian taxation that Indian railways have been almost entirely built, it is scandalous that for purposes of higher appointments the railways should be treated as practically a monopoly of Europeans; the desire to place Indian railways under State management so that Indians should have better opportunities of employment in the higher grades of railway service is a perfectly legitimate desire.

* *Acworth Report*, para. 230.

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It has been pointed out above that the Government have not accepted the principle of State management of Indian railways. When, however, the question of separating railway finance from general finances was discussed in the Assembly in September, 1924, the following agreement was reached between the Government and the Assembly.

"Government undertook that the arrangements for separation should hold good only so long as the East India Railway and the Great Indian Peninsula Railway, and the existing State managed railways, remain under State management; that no negotiations for the transfer of any of the railways to Company management should be concluded until facilities had been given for the discussion of the whole matter in the Assembly; and that, further, if any of the above railways were transferred to Company management, the Assembly should be at liberty to terminate the arrangements for separation."*

The separation of the railway budget from the general budget was unanimously recommended by the Railway Committee. "We do not think," they said, "that the Indian railways can be modernised, improved and enlarged so as to give to India the service of which it is in crying need at the moment, nor that the railways can yield to the Indian public the financial return which they are entitled to expect from so valuable a property, until the whole financial methods are radically reformed. And the essence of this reform is contained in two things:—(1) the complete separation of the railway budget from the general budget of the country, and its reconstruction in a form which frees a great commercial business from the trammels of a system which assumes that the concern goes out of business on each 31st March and recommences *de novo* on the 1st of April; and (2) the emancipation of railway management from the control of the Finance Department."

Under the old system the net receipts from the State railways (worked by State and by Companies) formed part of the general revenues of the country, out of which allotments, varying from year to year, were made for capital expenditure. The Mackay Committee of 1907 emphasized the need for adopting a steady annual rate of capital expenditure which could be maintained even in times

* *Railway Administration Report, 1924-25, para 5.*

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of difficulty, and they suggested Rs. 18.75 crores as a standard. But the following figures show that actual capital expenditure generally was much below the standard recommended by the Mackay Committee:—

Lakhs.		Capital Programme.	Lakhs of Rupees.
1908-09	15,00
1909-10	15,00
1910-11	16,30
1911-12	14,25
1912-13	13,50
1913-14	18,00
1914-15	18,00
1915-16	12,00
1916-17	4,50
1917-18	5,40
1918-19	6,30
1919-20	26,55
1920-21	21,98
1921-22	17,82

The stoppage of railway development during the War was inevitable, but even in pre-War years the allotments were below the standard recommended by the Mackay Committee. The consequences to the railways of this policy were serious: "There are scores of bridges with girders unfit to carry train-loads up to modern requirements; there are many miles of rails, hundreds of engines, and thousands of wagons whose rightful date for renewal is long over-past."*

The main objection to the old system was that the whole of the excess of railway revenue over expenditure in years in which expenditure was low was utilised for the general purposes of the Government, and no reserve was kept for the railways.

* *Acworth Report*, para. 68.

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The Acworth Committee unanimously recommended that the whole of railway receipts, after paying the working expenses and interest on capital borrowed by the State for railway purposes, should be at the disposal of the railways, to be devoted to new capital requirements (whether directly, or as security for new debt incurred) or to reserves, or to be utilised in the form either of reduction of rates or improvement of service.

With effect from the year 1924-25 the railway budget was separated from the general budget. Under the convention adopted by the Assembly in September, 1924, the railways make a fixed contribution to the general revenues equal to 1 per cent on the capital at charge of commercial lines *plus* one-fifth of the surplus profits of the penultimate year. In addition to these payments the railway revenues have to pay one-third of the excess over 3 crores of any surplus remaining to the railways after the payment of the fixed contribution as explained above.

The interest on the capital at charge of, and the loss in working strategic lines is borne by the general revenues.

GOVERNMENT AND INDIAN RAILWAYS

Of the important railway lines, five are owned and worked by the State; five are owned by the State but worked on its behalf by Companies enjoying a guarantee of interest from the Government;* two important lines† and many others are owned by private Companies, some of which are worked by the Companies, while others are worked by the State or by the Companies which work State-owned systems; several minor lines are the property of District Boards, or enjoy a guarantee of interest by such Boards.

Over all lines in British India, however, the Government of India exercise general powers of control; they have also a financial

* The North-Western, Eastern Bengal, East India (amalgamated with the Oudh and Rohilkhund Railway from the 1st July, 1925) and Great Indian Peninsula and Burma Railways are owned and worked by the State. The Bengal-Nagpur, Assam-Bengal, Bombay Bardoa and Central India, Madras and Southern Mahratta, and South Indian Railways are owned by the State but worked on its behalf by Companies.

† The Bengal and North-Western and Rohilkhund and Kumaon Railways.

interest in all Railway Companies in British India, and a preponderating interest in most of the important railways.

Railway construction started in 1849 when a contract was made with the East India Railway Company for the construction of an experimental line of 100 miles from Calcutta to Mirzapore or Rajmahal, the East India Company guaranteeing a return of 5 per cent on the capital invested; a similar contract was made in the same year with the Great Indian Peninsula Railway for a line from Bombay to Kalyan. The question was considered whether railways should be constructed by the State directly, but Lord Dalhousie held the view that railway construction was not one of the functions of government, and in 1854 the policy of entrusting the work to Companies enjoying a guarantee of interest was adopted. Contracts were made with several Companies between 1854 and 1860 by which the East India Company (or the Secretary of State), besides providing land, guaranteed interest on the capital at $4\frac{1}{2}$ to 5 per cent, according to the prevailing market rate of interest; it was also agreed that half of any surplus profits earned was to be used towards repaying the Government any sums by which it had made good the guarantee of interest; the remainder was to belong to the share-holders. The railways were to be held by the companies on leases terminating at the end of 99 years, but the Government reserved to itself the right of purchasing the lines after 25 or 50 years.

The guarantee system did not prove very economical, and in 1862 an attempt was made to promote railway construction by means of subsidies, instead of a guarantee of interest. The system was further developed in 1864. The subsidy took the form of an annual payment for 20 years at a rate not exceeding £100 per mile of line, with an addition in respect of bridges costing more than £10,000. The subsidies, however, failed to attract capital; the two unguaranteed companies that had been formed in 1862 were later given a guarantee of interest. It was recognised in 1869 that unguaranteed Companies could not be expected to play any important part in the development of Indian railways.

Two changes were now made in the Government policy in

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regard to railway construction. (1) It was arranged with some of the most important of the guaranteed Companies that half of the surplus profits for each half-year should be the property of the Government. This was a more profitable arrangement from the point of view of the Government than the old provision regarding the division of surplus profits. (2) The Government decided to construct railways itself. For several years after 1869 no fresh contracts with guaranteed companies were made except for small extensions.

By the end of 1879 India had 8,303 miles of railway, of which 6,128 miles had been constructed by Companies at an approximate cost of £97,872,000 and 2,175 miles by the State at a cost of £23,695,226.

In 1880 the Strachey (Famine) Commission urged the necessity of a rapid extension of the railway system. In view of the difficulty of borrowing large sums directly by the State for the purpose, the Commission recommended a re-trial of the guarantee system under conditions more favourable to the State. Several Companies were formed after 1880 with a guarantee of interest, but in each case the terms of guarantee given to the Companies were more favourable to the Government than in the case of the first guaranteed Companies. For example, the Government guaranteed 4 per cent interest to the Indian Midland and Bengal-Nagpur Railway Companies, but the Secretary of State was entitled to three-quarters of the surplus profits in excess of all interest charges.

The Government has freely exercised the right that it had reserved to itself of terminating the contracts of the railway Companies. In some cases the lines purchased have been transferred to State management (the Eastern Bengal, the Oudh and Rohilkhund, and Sind Punjab and Delhi lines for example). In other cases the lines were acquired and placed under the management of other Companies with which they were amalgamated (the Madras and the Indian Midland lines); in still other cases the old Company management was allowed to continue but more favourable terms were secured for the State by the reduction of the amount of the Company's capital, reduction of the rate of guaranteed

interest and modification of the clauses relating to the division of the surplus profits. This method was adopted also in the case of East India and the Great Indian Peninsula Railways, besides other lines, but these two lines, on the termination of their contracts in December, 1924, and June, 1925, were transferred to State management.*

The total mileage open to traffic at present is about 43,000.

ORGANISATION FOR GOVERNMENT CONTROL

The formation of a Railway Board was recommended in 1903 by Sir Thomas Robertson who had been appointed by the Secretary of State in Council as Special Commissioner for Indian Railways to enquire into and report on the administration and working of Indian railways. The Railway Board came into existence in 1905. It was made subordinate and directly responsible to the Government of India in the Department of Commerce and Industry.

On the recommendation of the Mackay Committee on Railway Finance of 1907, the Board was made independent of the Department of Commerce and Industry, though it remained under the administrative charge of the Member, Commerce and Industry Department, as the Railway member.

* The relations between the Government and the guaranteed Companies now working railways may be summarised as follows:—

The lines that they work are the property of the State.

The greater part of the capital is the property of the Government, either through having been originally supplied by it or through the acquisition by the Government of the greater part of the Companies' interests on the termination of old contracts.

When funds are required for further capital expenditure, the Government has the option either of providing them or of calling on the Company to provide them. The Company receives guaranteed interest at a fixed rate on its capital; and similar payments out of the earnings are made to the Government. If, after these have been made, surplus profits remain, they are divided between the Government and the Company in the various proportions provided for by the contracts. The Company's share is in all cases only a small fraction of the Government's share.

All the contracts, except one, which is for a fixed term of 25 years, are terminable at the option of the Secretary of State, at specified dates; and on termination the Company's capital is payable at par (except in the case of the East India Railway Company, which is for special reasons to receive a terminable annuity instead of a cash payment).

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The Acworth Committee recommended the creation of a new Department of Communications responsible for railways, ports and inland navigation, road transport and post and telegraphs under a member of Council in charge of Communications, assisted by a technical staff consisting, on the railway side, of a Chief Commissioner and four Commissioners. The recommendations of the Acworth Committee were not accepted in their entirety by the Government, but the old Railway Board has been reorganised. The present Railway Board consists of a Chief Commissioner as President, a Financial Commissioner, one Member, 4 Directors, 5 Deputy Directors, 1 Secretary and 1 Assistant Secretary.

The guiding principles in the development of our railway system have been two; humanistic and Imperialistic.

The Administrative control exercised by the Government over the Companies is as follows;—

The Company is bound to keep the line in good repair, in good working condition, and fully supplied with rolling-stock, plant, and machinery; to keep the rolling stock in good repair and in good working condition; and to maintain a sufficient staff for the purposes of the line; all to the satisfaction of the Secretary of State.

The Secretary of State may require the Company to carry out any alternation or improvement in the line, or in the working, that he may think necessary for the safety of the public or for the effectual working of the line.

The Secretary of State may require the Company to enter into agreements, on reasonable terms and conditions, with the administration of adjoining railways for the exercise of running powers, for the supply to one another of surplus rolling-stock; for the interchange of traffic and rolling-stock and the settlement of through rates, and for additions and alterations to, or the redistribution of existing accommodation in junctions or other stations in view to their convenient mutual use.

The train services to be such as the Secretary of State may require. In order to secure a general control over the rates by Companies the Secretary of State has retained power to settle the classification of goods and to authorise maximum and minimum rates within which the companies shall be entitled to charge the public for the conveyance of passengers and goods of each class.

The Company has to keep such accounts as the Secretary of State may require, and these are subject to audit by the Secretary of State.

In all other matters relating to the line, the Company is made subject to the supervision and control of the Secretary of State, who may appoint such persons as he may think proper for the purpose of inspecting the line, auditing the accounts, or otherwise exercising the power of supervision and control reserved to him. In particular, the Secretary of State has the right to appoint a Government Director to the Board of the Company, with a power of veto on all proceedings of the Board. All the monies received by the Company in respect of the undertaking, whether on capital or revenue account, have to be paid over to the Secretary of State. (Appendix A. to Railway Administration Report.)

The railway is an important means of famine protection. The heavy mortality in famines in the pre-railway days was principally due to the difficulty of moving grain to the famine-stricken areas. The difficulty has been largely overcome by means of the railway. We have also seen that it was at the instance of the Famine Commission of 1880, which estimated that at least 5,000 miles were still necessary to protect the country from famine, that a more energetic policy in regard to railway construction was adopted.

In the second place, railways have helped in (a) the consolidation of political power and (b) the development of the export of raw produce and the import of manufactured goods.

(a) The most economical method of building up the railway system, as Captain Guenther Voigt points out, would have been to begin from the east or the west coast and to expand the railway net inwards. The lines already built would have helped to carry railway material, and the cost of railway construction would thus have been reduced. But railway construction was started simultaneously from several points, and all considerations of costs were ignored. The object was to link up the three Presidencies, with a view to facilitating the movements of troops from one part of the country to another. The Mutiny had shown that in a country that was practically roadless the rapid construction of lines connecting distant points was of the greatest political importance. This aim was steadily pursued, and by 1872 trains were running between Lahore-Calcutta, Lahore-Bombay, Bombay-Allahabad-Calcutta, and Lahore-Bombay-Madras.

(b) It has been shown in a preceding chapter that till recently no attention was paid by the Government to the development of Indian manufacturing industries. We have also seen that even at the present time our exports consist mostly of raw products and imports of manufactured goods. Railway policy has stimulated this development. The Indian Industrial Commission drew attention to the favourable rates for raw produce moving to the ports and imported manufactured articles moving up-country from the ports. The effect of such railway rates has been to discourage Indian manufacturing industries. As an example the Industrial

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Commission quoted the case of hides: the port rates were 50 per cent less than the internal rates, which discouraged Indian tanning. "It would be easy to support the statements made above," the Commission added, "by numerous instances; but the facts are generally admitted."*

The result of railway policy has been the congestion of industries in port towns. The Commission, with the object of encouraging the diffusion and decentralisation of industries, recommended the adoption of the principle in railway rating that "internal traffic should be rated as nearly as possible on an equality with traffic of the same class over similar distances to and from the ports."†

Complaints were made not only to the Industrial Commission but to the Acworth Committee and the Fiscal Commission that Indian industries had to pay unfair rates both on their raw materials transported from other parts of India and on their manufactured articles despatched to the various markets. As may be expected the railway authorities believe that the complaints are largely unfounded. The Fiscal Commission thought otherwise.*

Our railway system has not developed naturally, like the English system, according to the requirements of internal trade and industry. According to Captain Guenther Voigt, the colonial relation between India and England furnishes the key to Indian railway policy in the past as well as the present.†

INDIAN RAILWAYS IN THE DEPRESSION

In the period of 5 years ending 1928-29 the average annual contribution of the railways to the general revenues was about 6 crores. In this period the net revenue of the railways exceeded the interest charges each year by $9\frac{3}{4}$ crores on an average. In the year 1929-30, net revenue was still greater than interest-charges,

* Report, para. 271.

† Report, para 272.

* Report of Fiscal Commission, para 127.

† *Staat und Eisenbahnwesen in British-Indien*, concluding remarks (Julius Springer, Berlin, 1925).

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but only by 4,04 lakhs, and therefore the contribution to the general revenues of 6,12 lakhs was paid by drawing on railway reserves for the difference. From 1930-31 to 1936-37 interest charges each year exceeded the net railway revenue. The railways paid a contribution of 5,74 lakhs to the general revenues in 1930-31; nothing after that until 1937-38.

The following table shows the financial position of the railways in certain years:

Year.	Net Revenue.	Percentage of net revenue to capital at charge.	Interest charges.	Percentage of interest charges to capital at charge.	Surplus (+) or deficit (—)
1924-25	37,06	5'8	23,90	3'5	+13,16
1927-28	38,12	5'3	27,27	3'8	+10,85
1930-31	27,53	3'5	32,72	4'2	—5,19
1931-32	23,87	3'0	33,07	4'2	—9,20
1932-33	22,68	2'9	32,91	4'2	—10,23
1933-34	24,62	3'1	32,58	4'1	—7,96
1934-35	26,74	3'4	31,80	4'0	—5,06
1935-36	27,40	3'5	31,39	4'0	—3,99
1936-37	32,02	4'1	30,81	4'0	+1,21
* 1937-38	(1937-38 → +201 1938-39 → +213)				* +276

It is seen that the net revenue was lowest in the year 1932-33, and the deficit highest in the same year. With the improvement of trade the position of the railways gradually improved, but it was only in the year 1936-37 that the railways could show a surplus. The year 1937-38 brought increased prosperity to the railways. Gross traffic receipts in 1937-38 exceeded the figure for 1936-37 by over 3 crores. After meeting all charges, including depreciation and interest on capital at charge, the net result of the working was a gain of Rs. 276 lakhs in 1937-38.

The surplus fell to 201 lakhs in 1938-39, but for 1939-40 a surplus of 213 lakhs is anticipated.

At the end of 1936-37 the unliquidated liabilities of the railways amounted to 61 crores, of which 30¼ crores represented the

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amount borrowed from the depreciation fund and 30¾ crores unpaid contributions to general revenues:

	Loans from Depreciation Fund. Crores.	Unpaid contributions to general revenues. Crores.
1931-32	4.25	5.36
1932-33	10.23	5.23
1933-34	7.96	5.21
1934-35	5.06	5.04
1935-36	3.99	4.99
1936-37	-1.21	4.91
	30.28	30.74

The railways have taken steps to improve earnings and reduce working expenses, the most important of the steps being: the introduction of cheap fares to stimulate traffic particularly in competitive areas and special reductions in freight rates for parcels and goods traffic; improvement of arrangements for booking traffic by the organisation of street collection and delivery of parcels and goods in some of the larger towns; formation of research organisations on certain railways to encourage the development of new traffic; to assist in the development of areas and to organise special tours etc.; reduction of expenses through the pooling of railways resources at certain joint stations and in other ways; and mechanical improvements, e.g., pooling of locomotives, obtaining increased mileage from engines and condemning engines and railway stock without replacement.

The railways obtained the services of Mr. Pope, of a British Railway, to ascertain whether further economies were possible on the Indian railways. As a result of Mr. Pope's visit, small organisations have been created on the more important railways to conduct detailed investigations known as 'job analysis.' These investigations cost money, but are the means of effecting economies much greater than the cost. In addition, Mr. Pope suggested directions in which railway earnings might be increased, viz., improved publicity work; increased efforts of salesmanship; closer

study of exports, imports and markets; and more elasticity in the quotation of rates and fares.

RAIL-ROAD COMPETITION

Motor transport has developed rapidly since 1925-26. In that year the number of omnibuses imported was 6,343. The number rose to 15,306 in 1929-30. It fell thereafter and was smallest in 1932-33, 2,676. With the improvement of trade it rose to 9,973 in 1934-35 and 15,077 in 1937-38. At first competition with the railways was confined to short distances. But recently motor buses are carrying both passengers and goods over long distances as well in direct competition with the railways.

The competition is keenest over short distances and according to the railways, unfair. It must be uneconomical for motor buses. For example, passengers are carried to Amritsar for 4 annas, which is equal to about $1\frac{1}{2}$ pies per mile. It has been calculated that economical fare for buses is about 5 pies per passenger mile, and this is the rate charged by them where is no competition.

Some time ago the whole question was examined by a small expert committee. The committee on the whole agreed with the railways that public motor vehicles were not adequately inspected, that they were systematically over-crowded, that the motor transport industry was subject to no Hours of Work rules, that the drivers of motor vehicles were not so carefully examined as to their capabilities like the railway operating staff, that the same attention was not paid to accidents to public motor vehicles as to railway accidents, and that the motor transport industry was not subject to obligations such as those imposed on the railways by the Railway Act.

Control over motor vehicles has been made stricter, but unfair competition continues.

The utility of buses where railway service is inadequate is obvious. "But", wrote the Committee, "where the advantage of motor transport over the railways is only slight, the community cannot, at the present stage, afford both" (p. 24). One must agree with the Committee that both rail and road transport have

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their appropriate field. The problem is that of confining each to that field, and that has not yet been solved.

It has been suggested that a motor bus service should not be allowed to run in direct competition with the railway, or that no bus should be allowed to start, say, within two hours before or after the departure of any train. That might suit the railways but it would not suit the motor bus service. It must also be admitted in spite of its inconveniences, the motor bus service is of real use to the poorer classes of the travelling public. It is also due to the new competition that the railways are paying more attention to the comforts of III class passengers than they ever did before.

Sir Thomas Stewart, in introducing the railway budget for 1939-40 explained the railway rate policy under the new conditions of rail-road competition. In particular areas the railways are compelled to quote special rates, but it is not possible for the railways to meet road competition by a reduction of all rates. Railway rates are based largely on the principle of 'what the traffic can bear'; "The position of the railways was roughly this, that what we lost on the roundabouts, we make up on the swings." The traffic as a whole pays the cost as a whole. But road competition has 'disturbed the harmony and balance of the railway rate system.' The new competitors 'own swings but contract no losses on the roundabouts.' The situation cannot be met by a general reduction in all rates. Railway rates in India are low, 'the average rate per ton being the lowest in the world.' Another point which Sir Thomas Stewart made is that the profits earned by the railways do not enrich any private capitalist. They go into central revenues and are utilized to give relief to the general tax-payer and to assist provincial administrations.

In the rail-road competition, the railways enjoy two advantages. First, they are largely State-owned or State controlled, while road transport companies are in private hands. Secondly, railways have proper sites for their tracks which are, in general, in excellent condition. For motor traffic there is not only an inadequacy of roads, but such roads as exist are 'of a deplorably low

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standard.' In the opinion of experts if "India's 300,000 miles of road were re-constructed on the model of the great German Reichsautobahnen (motor roads), motor transport would destroy rail transport within a decade" (*Capital Jubilee* No., 1938, p. 109).

CHAPTER X

FOREIGN TRADE AND TARIFFS

The foreign trade of a country is a very good index of the economic activities of the people. Agriculture is the main occupation of the people of India: this is shown not only by the occupational census but by the character of our foreign trade.

The following statement shows the proportion of articles mainly or wholly manufactured to our total imports and exports in certain years:

		Mfd. Imports Crores	Total Imports Crores	Per cent	Mfd. Exports Crores	Total Exports Crores	Per cent
1928-29	..	180	253	71	90	330	27
1931-32	..	84	126	66	43	156	28
1934-35	..	98	132	74	39	151	26
1935-36	..	99	134	74	42	161	26
1936-37	..	92	125	74	50	196	26
1937-38	..	108	173	62	55	181	30

The figures for 1937-38 are exclusive of Burma.

The character of our foreign trade is evident from these figures. Jute manufactures represent more than half of the total value of manufactured exports.

While both imports and exports have much increased during the past sixty years, their general character has remained unchanged.

The character of our foreign trade in the 16th and 17th centuries was essentially different. The bulk of the exports consisted of cotton manufactures; the imports chiefly consisted of gold and silver, a few articles of luxury and fancy goods meant for the rich, and spices.

Let us first consider the imports. In his *Remonstrantie* or report on Surat, dated 22nd October 1615, Pieter Gielis van

Ravesteijn gives an interesting list of articles imported for Akbar from England. His object was to indicate to the authorities in Holland the nature of the demand for foreign goods at the Court. The list includes fine swords and knives which will cut through iron; satin and velvet of various colours ("but no black," for Van Ravesteijn thought they could not be sold at a profit); fine woollen cloth, green, yellow and crimson; 3 or 4 pieces of men's and women's clothing, each of a different fashion; all kinds of oil paintings, landscapes as well as portraits; a small quantity of perfumed leather; mirrors of full man's size; parrots, cockatoos and other pet birds; Japanese weapons; ornamented copper candle stands; ornamented, genuine glass, and table service inlaid with gold; 3 or 4 watches (hour-glasses) of metal and crystal; breast plates, arms such as spikes, and matchlocks.

And Van Ravesteijn added: "Various other curiosities, not of great value, would be welcome, and 5 or 6 good sleuth-hounds and some powerful hunting dogs, who would not be afraid of fighting leopards and tigers"¹

The imports into the principal ports on the Coromandal coast, viz., Tegnapatam or Pulicat, Petapoly (Nizampatam) and Masulipatam, where the Dutch had factories, were as follows: pepper; mace; nutmegs; cloves; sandalwood; aloes-wood; lead; sulphur; alum; raw silk from Aitchyn and from China; twisted silk from China; silk manufactures "but little in demand"; musk; vermillion; quicksilver; camphor from China as well as from Borneo (but the latter was most in demand); tin; crimson woollen cloth; crimson kerseys; Chinese rolled damask; Chinese gold wire; tinsel; tortoise-shell; rubies; Chinese lacquer-work and some fancy goods. There was some demand for porecelain in Petapoly, which is explained by the presence of Persian merchants "who eat from porcelain-ware, but not the Hindus."² If we add gold and silver, and horses from Iraq and Arabia, we have a fairly complete picture of imports into India three or four centuries ago.

¹ Terpstra, *Westerkwartieren*, 215. ² Schorer's account of the Coromandal coast dated 1616.

It will be seen that with the exception of spices and one or two other articles, the imports chiefly consisted of articles of luxury meant for the rich. According to Moreland, "the masses of Indian consumers were too poor to buy imported goods."³ But the masses of consumers, whether in India or elsewhere, are always too poor to buy imported articles of luxury. The character of the import trade is explained by the self-sufficient character of India of the past. The terrible machines which have transformed European industry and ruined Indian weavers and other hand-workers, had not yet been invented, and our craftsmen were unbeaten in their art.

It has been said above that cotton goods formed the bulk of our exports in the 16th and 17th centuries. Cotton weaving was one of the main occupations of the people, and as an industry it was even more important than agriculture, for while agriculture supplied the needs of the population (exports of agricultural produce were for the most part unimportant), the cotton industry produced cloth not only sufficient to clothe the masses of India but for export.

The whole world was a market for the products of this national industry.

Cotton weaving is a very ancient Indian industry. From the accounts of the Greeks who accompanied Alexander the Great on his expedition to India it appears that the art of weaving was highly developed in India in the 4th century before Christ, and produced the finest goods.⁴ Cotton goods were exported to Greece where they were known as *Gangetika*.⁵ From very early times then, down to the 16th and 17th centuries, the industry continued to grow and prosper; nor did its growth and prosperity cease under the Moghul Kings.

The importance of the exports of cotton goods may be judged from the following very few references to the trade (selected from a great many) in the accounts of contemporary European travellers.

Duarte Barbosa (Portuguese) thus refers to the ships from Cambay that he saw (1514) at Aden: "And these ships of

³ *From Akbar to Aurangzeb*, p. 53.

⁴ Lassen I, 295. (*Indische Alterthumskunde*).

⁵ *Ibid.* II, 24.

Cambay are so many and so large, and with so much merchandise, that it is a terrible thing to think of so great an expenditure of cotton stuffs as they bring."⁶

Barbosa mentions the sacking of Mombasa by the Portuguese a few years earlier (15th August 1505). A fuller account based on original sources is given in a recent publication.⁷ When the invaders stormed the King's palace, they found there large quantities of cotton goods from Cambay which, says Huemmerich, provided clothing for the whole of the East African coast.

Cotton goods were made all over India, but there were three great centres of the export trade. Cambay supplied places to the west of India; countries to the east were supplied from Coromandal and Bengal. The importance of exports from the Coromandal coast may be judged from the following statement contained in a letter dated June 1612 from Hendrik Brauwer (later Dutch Governor-General) to the Directors of the Dutch East India Company: "The coast of Coromandal is the left arm of the Moluccas and the islands round about, because without cloth imported from Coromandal, trade would be dead in the Moluccas."⁸

The demand for cotton goods made on the Coromandal coast was not limited to the places in the East frequently mentioned in the early Dutch reports, viz., Atechyn, Priaman, Queda, Perae, Sumatra, Java, Malaya, Patane, the Moluccas, Banda, Borneo, Celebes, Solor, Boreroe, Bantam, Amboina, Siam, Pegu, Tenasearim, and Arakan. It was wider. A Resolution of the General Council at Bantam, dated 3rd December 1610, refers to "cloth and other goods which have been ordered from the coast of Coromandal for the Moluccas, Java and the Fatherland."⁹ Already in 1610 there was a keen demand in Holland for Indian goods.

In one of the earliest MS. accounts of the east coast, for the year 1607-08, preserved in the Dutch Records Office at the

⁶ *The Coasts of East Africa and Malabar*, 28.

⁷ Huemmerich (*Die erste deutsche Handelsfahrt nach Indien*, 1505-06), 61.

⁸ Heeres, *Bijdragen*, 154.

⁹ Terpstra, *Koromandal*, 173.

Hague,¹⁰ there is another interesting reference to cotton goods. It appears that the Dutch experienced difficulty in buying red cotton cloth through the usual middlemen in Petapoly, the reason being, that the trade was controlled by the King of Golconda, in whose jurisdiction Petapoly lay, who had agreed to supply the King of Persia every year for his army several thousand pieces of red cotton stuffs. The goods must have been exported to Persia by sea.

Nor was the demand for our cotton goods less keen in England. The exports to England grew rapidly in the first quarter of the 17th century, and demand was limited only by the want of funds. Indian calicoes were popular in England and replaced the more expensive linens imported from Holland and Germany. The conversation which the Deputy Governor (Morris Abbot) and Thomas Mun had with King James and which Abbot reported to the East India Company in August 1623, is reproduced in *English Factories*, 1624-29.¹¹ The King asked "what vent they had for the greate masse of callicoes [that] came yerelye. They answered that much of it is very useful and vendes in England, whereby the prizes of lawnes, cambrickes, and other linnen cloth are brought downe; for the rest England is now made the staple for that commoditie, which having first served His Majestie's dominions, the overplus is transported into forrayne partes in the nature of a home bredd commoditie. The King approved exceedingly thereof, and said this was the ready way to bring treasure into his kingdome."¹² On March 30, 1625, Abbot, who had now become Governor, told a General Court that "the commodities of Zuratt doe vend heer much better than in former tymes; for example, . . . callicoes . . . hath found such vent in forreyne partes as if the Company had 100,000 or 200,000 peeces they wold bee uttered in short time."

The few extracts given above are sufficient to show the importance of cotton goods in our foreign trade, and of the weaving industry in giving employment to our workers.

Among other articles of export indigo was of some importance; the method of its manufacture has been described by Pelsaert,

¹⁰ Kol. Arch. No. 961 (Dutch Letters Received).

¹¹ p. xxvi.

¹² Terpstra, *Koromandal*, 176.

W. G. de Jongh and Van Twist. Cotton yarn was exported from the Coromandal coast. In Masulipatam there was a great quantity of iron and steel, which also figured among the exports from the East coast. Among the articles of trade in Gujrat mentioned by Twist, in addition to cotton goods and indigo, we find opium, *hing*, lac, myrobolams, gambier, drugs, precious stones, and alabaster and marble. Rice was exported from Bengal.

Raw silk has been mentioned above among imports. The Indian silk industry depended upon ~~improved~~ raw materials, and Gujrat was one of its important centres. Van Twist mentions silk, goods of various colours and designs, and goods of mixed cotton and silk.

We may next briefly notice the nature of India's balance of trade in those days.

As at the present time, exports much exceeded imports in value. But our favourable balance of trade is now a sign of our debtor position. The Home charges amount to about £40 millions annually; this is expenditure charged to the revenues of India. Apart from the Home charges, there is an annual drain from India of profits of important industries, which are a monopoly of, or controlled by foreign capital. In addition, invisible imports in the shape of the services of foreign shippers, bankers and commission agents have to be paid for. While the balance of trade is generally in our favour, the balance of payments is against us, and we pay our debts abroad by exporting goods greater in value than that of goods imported.

The situation was different in the past. The demand for our manufactures was keen in the markets of the world, while our demand for the manufactures of other countries was so small as to be negligible. Indian produce was exported in Indian ships manned by Indian sailors, and Indians largely earned the profits from exchange and the provision of credit needed for trade. Not only the balance of trade but the balance of payments was heavily in our favour. In other words, India was a creditor country, and the world paid her tribute in silver and gold.

THE TARIFF

In the rest of this chapter we are concerned with the trends in our foreign trade during the past sixty or seventy years, and particularly the present situation. We begin our study with the Indian tariff.

Incidentally we may note that while our Moghul Kings held Mercantilist views in regard to silver and gold, they did not exclude foreign goods by means of heavy import duties. The general rate of duty on imports in the time of Akbar was $2\frac{1}{2}$ per cent ad valorem. Indian hand-industries needed no protection then and light duties were levied on imports for the sake of revenue.

Under Company rule, the general rate of duty levied on imports into India was 10 per cent ad valorem; almost all goods exported were taxed at the rate of 3 per cent. The duty on imports was reduced to $7\frac{1}{2}$ per cent in 1864 and 5 per cent in 1875. Duties on exports were gradually repealed and in 1875 only rice, indigo and lac were still subject to duty.

The "reform" of the Indian tariff in accordance with the principles of free trade began in 1878. The duties on a great number of articles, including some of the coarser cotton goods, were remitted in that year, and in the following year the duties on grey cotton goods, except those of the finer qualities, were repealed. In 1882, with the exception of salt, all the remaining import duties were repealed.

The reasons which led the Government to abolish the cotton and other duties were not merely economic. But at the back of the mind of our administrators was the idea that such protection as the tariff afforded to Indian industries was economically indefensible. Again, free trade was the policy of the United Kingdom, and it was thought to be wrong for India to levy duties on imports when the United Kingdom did not do so. In the Financial Statement for 1878 we find the principles which governed the customs legislation of the United Kingdom, "now admitted axioms by all who recognise the theoretic advantages of free trade," held up as a model for India.

The abolition of cotton duties in 1879 met with strong opposi-

tion in the Viceroy's Council; it was in opposition to the opinion of the majority of the Council that Lord Lytton carried out the measure.

Financial pressure compelled the Government in 1894 to reimpose the tariff of 1875 with some modifications. In December 1894 a 5 per cent duty was imposed on cotton goods and yarn imported into India, and a countervailing excise duty of an equivalent amount was imposed on cotton goods made in Indian power mills. Referring to the excise in his speech on the Cotton Duties Bill on the 17th December 1894, Mr. Westland (Finance Member) frankly admitted that he did not recommend the measure on its own merits. The instructions of the House of Commons were that if the Government of India were obliged by financial necessity to impose a duty on cotton goods, an equivalent duty must be imposed on similar goods manufactured in India to deprive it of a protective character. Two years later the duty on yarns was removed and both the duty on cotton goods and the excise were lowered to $3\frac{1}{2}$ per cent.¹³ — *excise abolished in 1928.*

The Tariff Act of 1894 was amended in 1899 with a view to check the imports of bounty-fed sugar from Germany and Austria-Hungary. In two years, 1895-96 to 1897-98, the imports of sugar from these two countries increased from 35,956 tons to 107,452 tons. The result was the closing of Indian sugar refineries in many places. It was feared that if the imports continued unchecked, the cultivation of sugarcane would be abandoned.

The customs tariff was completely revised in 1916. With effect from March 1, 1916, the general rate of duty was raised from 5 to $7\frac{1}{2}$ per cent; the free list was curtailed, the duty on iron and steel was raised from 1 to $2\frac{1}{2}$ per cent and that on other metals from 5 to $7\frac{1}{2}$ per cent, and the duties on articles subject to special rates, as arms and ammunition, liquors, cigars and cigarettes, were enhanced. Export duties were also imposed on tea and jute. The duty on cotton manufactures was not altered, as the proposal to raise it would have revived old controversies at a time when it was necessary to concentrate all attention on the War. In the following

¹³ The excise was abolished in April 1926.

year, however, financial reasons compelled the Government to raise the import duty on cotton goods from $3\frac{1}{2}$ per cent to $7\frac{1}{2}$ per cent without any change in the excise, which remained at $3\frac{1}{2}$ per cent. At the same time the export duties imposed on tea and jute in 1916 were doubled.

The customs tariff was again recast in the Budget for 1921-22. The general rate was increased from $7\frac{1}{2}$ to 11 per cent. Duties on liquors, sugar, tobacco and certain articles of luxury were raised and a specific duty of 12 annas per gross boxes was imposed on matches in place of the old $7\frac{1}{2}$ per cent ad valorem duty.

Under the stress of financial necessity the customs tariff was again revised in the Budget for 1922-23. The general tariff was raised from 11 per cent to 15 per cent, but the duty on cotton goods was not altered. The duties on iron and steel, railway material, sugar, alcoholic liquors, and imported petroleum were considerably enhanced. The duty on matches was doubled, and a duty of 5 per cent was imposed on imported yarn.

The whole question of India's fiscal policy was examined by the Fiscal Commission of 1921-22. The report of the Commission was not unanimous, the minority recommending 'Protection' and the majority 'Protection applied with discrimination.' The difference between the two points of view, for all practical purposes, is slight, for protection must always be applied with discrimination. A Tariff Board was constituted in accordance with the recommendations of the Fiscal Commission; its work in connection with the more important industries which have applied for protection has been already reviewed. In dealing with claims for protection the Tariff Board has to satisfy itself (a) that the industry possesses natural advantages, (b) that without the help of protection it is not likely to develop at all, or not so rapidly as is desirable, and (c) that it will eventually be able to face world competition without protection.

The chief objects of the Commission in recommending the adoption of a policy of discriminating protection were to reduce the burden which protection inevitably imposes upon the consumer, to prevent the establishment of unsuitable industries (which might

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be the result if all kinds of industries were indiscriminately protected), and to minimise the effect of protection on the balance of trade, or to maintain a favourable balance of trade.

At present the general rate of the tariff is 25 per cent ad valorem. The import duty on certain classes of British cloth imports was reduced from 25 per cent to 20 per cent ad valorem in 1936.

IMPERIAL PREFERENCE

The question of Imperial preference was first officially considered by India in 1903. Britain sought protection in our markets because of the increasing competition she met from Japan, Germany and the United States.

Sixty years ago the share of the United Kingdom in our total trade amounted to more than 60 per cent. "The flow of trade with other countries," says the Review of the Trade of India for 1884-85, "in comparison with that between England and India, is of little significance." The United Kingdom, then, was the only country which extensively manufactured goods adapted to our requirements, and she met with little competition in our markets either from home industries or foreign manufacturers. The situation has materially changed during the past 60 years. This is shown by the following tables:

Joseph Chamberlain - formerly a free-trader - advocated the principle of Imperial preference for maintaining her position in foreign markets.

CHART NO. 16 PERCENTAGE SHARE OF THE UNITED KINGDOM IN INDIA'S FOREIGN TRADE.

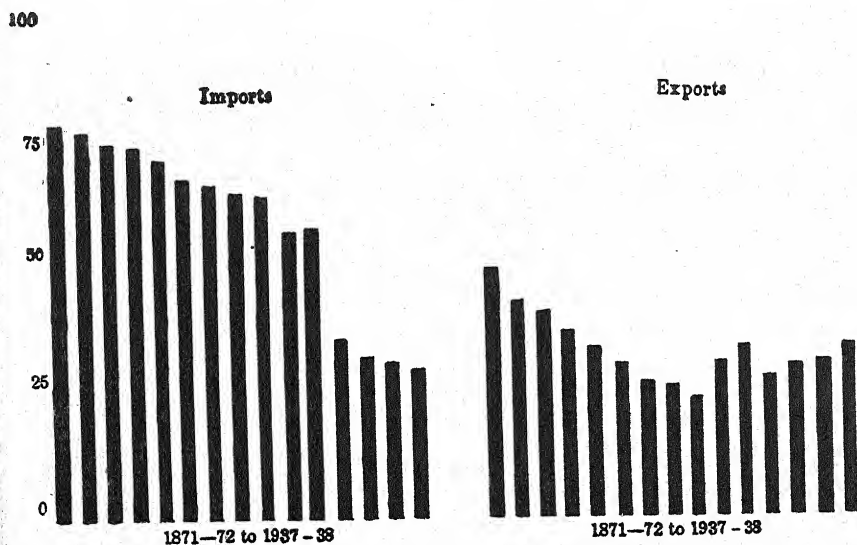
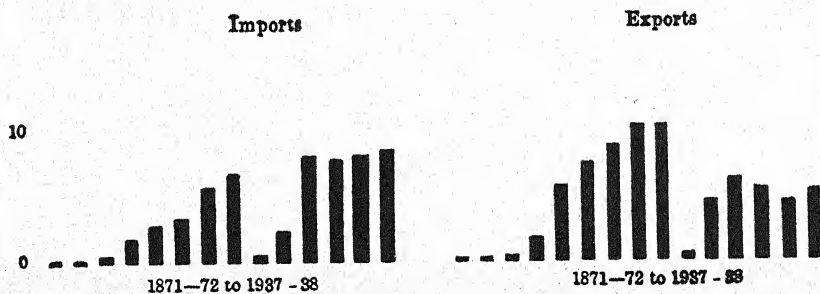


CHART NO. 17 PERCENTAGE SHARE OF GERMANY IN INDIA'S FOREIGN TRADE.





FOREIGN TRADE AND TARIFFS

TABLE I

PERCENTAGE SHARE OF CERTAIN COUNTRIES IN INDIA'S FOREIGN TRADE

	U.K.		Germany		U.S.A.		Japan	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
1871/72—75/76	77.9	49.6	0.1	0.3	0.3	3.5	0.0	0.0
1876/77—80/81	76.4	43.1	0.1	0.4	0.7	3.4	0.1	0.1
1881/82—85/86	74.5	41.3	0.2	0.7	1.4	3.7	0.1	0.3
1886/87—90/91	73.8	37.1	0.7	2.2	2.3	3.8	0.1	0.9
1891/92—95/96	70.6	33.4	2.1	6.1	1.8	4.1	0.3	1.5
1896/97—00/01	67.7	30.2	3.0	7.7	1.9	6.0	0.8	4.3
1901/02—05/06	65.6	26.1	3.6	9.0	1.7	6.9	1.2	5.8
1906/07—10/11	63.9	25.7	5.9	10.6	2.7	8.0	2.0	5.6
1913/14 ..	64.2	23.5	6.9	10.8	2.6	8.9	2.6	9.3
1914/15—18/19	56.5	31.1	0.7	0.9	7.0	11.9	10.4	11.2
1919/20—23/24	57.6	34.2	2.8	4.9	8.5	12.0	6.9	13.3
1931/32 ..	35.4	27.5	8.0	6.6	10.1	8.9	10.5	8.7
1935/36 ..	31.7	29.9	7.9	5.7	5.6	10.7	13.0	13.3
1936/37 ..	31.0	31.4	8.2	4.7	5.3	9.9	13.3	14.6
1937/38 ..	29.9	34.0	8.8	5.6	7.4	9.9	12.8	9.8

(Note.—Exports include re-exports. Figures for the earlier years up to 1913-14 have been taken from *Der Kampf um den Weltmarkt*, Jena, 1920, p. 57).

TABLE II

SHARE OF THE UNITED KINGDOM IN INDIA'S TOTAL TRADE

Year	Per cent of total trade.		
1875-76	62.2
1885-86	57.1
1895-96	46.4
1905-06	42.9
1913-14	40.9

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It will be seen that from 62·2 per cent in 1875-76, the share of the United Kingdom in our total trade fell to 40·9 per cent in 1913-14.

Taking imports and exports separately, we find that in the five years 1871/72 to 1875-76 no less than 77·9 per cent of the total imports came from the United Kingdom, the share in the import trade of Germany, Japan and the United States being negligible. For 1913-14, the figure for the United Kingdom is 64·2 per cent.

The Review of the Trade of India for 1884-85 notes that about that time our direct trade with France was of greater value than that of any two other European countries combined. At the present time, Germany, the United States of America and Japan have each a larger share in our total trade than France.

From practically nothing sixty years ago the share of these countries in our imports increased steadily till the outbreak of the War. Germany lost ground in the War and the post-War period, but what Germany lost, the United States, and particularly Japan gained.

The share of the United Kingdom in our exports fell from about 50 per cent in the five years ending with 1875-76 to 23½ per cent in 1913-14. There was a considerable increase in the value as well as volume of exports to the United Kingdom during the War, but in 1928-29, of Indian produce, the United Kingdom took only slightly more than 21 per cent of the total. In the same year about 12 per cent of our exports went to the United States, about 10½ per cent to Japan and 9½ per cent to Germany.

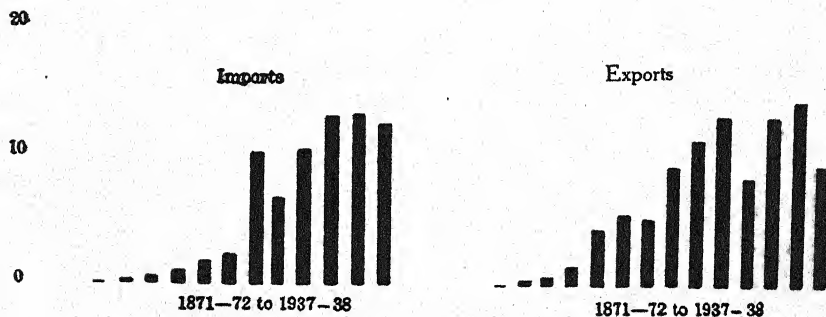
Considering the heavy decline in the demand for British goods it is not surprising that British manufacturers should have thought of Imperial Preference as a means of stimulating this demand.

Lord Curzon's Government rejected Imperial preference because of the danger of retaliation on the part of foreign countries. The greater portion of our exports, they pointed out, "compete successfully in foreign markets by reason of their cheapness rather

CHART NO. 18 PERCENTAGE SHARE OF THE UNITED STATES
IN INDIA'S FOREIGN TRADE.



CHART NO. 19 PERCENTAGE SHARE OF JAPAN IN INDIA'S
FOREIGN TRADE.



than of their quality or kind" (Letter to the Secretary of State, dated 22nd October, 1903).

The question of making the British Empire self-sufficient was seriously considered during the War. The Imperial War Conference, 1917 passed the following Resolution:

"The time has arrived when all possible encouragement should be given to the development of Imperial resources, and especially to making the Empire independent of other countries in respect of food supplies, raw materials, and essential industries. With these objects in view this Conference expressed itself in favour of:—

"(1) The principle that each part of the Empire, having due regard to the interests of our Allies, shall give specially favourable treatment and facilities to the produce and manufactures of other parts of the Empire.

"(2) Arrangements by which intending emigrants from the United Kingdom may be induced to settle in countries under the British flag."

The United Kingdom adopted the policy of preference in 1919. Without altering its general tariff policy she granted to the whole Empire preferential rates, which were usually five-sixths or two-thirds of the full rate, on nearly all articles on which import duties were levied.

In India, the Imperial Legislative Council adopted a resolution in February, 1920 for the appointment of a Committee to report 'whether or not it is advisable to apply to the Indian Customs Tariff a system of preference in favour of goods of Empire origin.' This led to the examination of the whole question by the Indian Fiscal Commission (1921-22). The general conclusions of the Fiscal Commission on the question of preference are summarised below:—

1. Indian exports are not of a kind to benefit appreciably from preference: "The economic advantage derived from a preference tends to be more important in the case of manufactured goods than in the case of raw materials. Manufacturers nearly always meet with keen competition in foreign markets and therefore

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a preference on manufactures is nearly always of value. The position in regard to raw materials is different" (Para 233).

2. India could not grant extensive preferences without serious loss to herself. The Commission were chiefly thinking of the cost to the consumer. In regard to retaliation, the Commission thought that there was not much danger to be feared on that score.

The Commission laid down the following three principles which were to govern the application of a policy of preference:—

1. No preference was to be granted on any article without the approval of the Indian Legislature.

2. No preference given was, in any way, to diminish the protection required by Indian industries.

3. Preference was not to involve any appreciable economic loss to India after taking into account the economic gain which India derives from the preference granted her by the United Kingdom.

The Commission duly emphasized the Imperial aspect of the question:—

"We do not forget that the United Kingdom is the heart of the Empire, that on its strength depends the strength and cohesion of the Empire, and that its strength is bound up with the prosperity of its export trade, which has enabled a small island to find the resources which bind together and uphold the great Commonwealth of Nations known as the British Empire. Unless the United Kingdom maintains its exports trade the heart of the Empire will weaken, and this is a contingency to which no part of the Empire can be indifferent. Nor again do we forget that the communications of the Empire are guarded by the British Navy, and that the burden of maintaining that essential service falls almost entirely on the people of the United Kingdom." [Para 260].

Public opinion in India was thoroughly hostile to Imperial Preference in 1921-22, and it remained hostile when the Ottawa Trade Agreement was concluded. It had been made clear as far back as 1902 that the object of Imperial Preference was not to establish free trade within the Empire—the Dominions would never have agreed to Imperial free trade. But the Indian

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mercantile community feared that preference would operate to weaken the protection granted to Indian Industries, that it would place a heavy burden on the Indian consumer for the benefit of British industries, and that it would affect India's fiscal autonomy. Recently public sentiment in regard to preference has undergone a change. This is on account of the emergence of the new order in international trade which has made it vital for India, in the interests of her export trade, to gain and retain the good will of Empire customers, even if it means burdening Indian consumers with higher cost of imported goods.

Reference has been made above to Indian Fiscal Autonomy. This was the result of a Fiscal Convention according to which the Secretary of State for India did not interfere in tariff matters when the Government of India and the Legislature were in agreement. The Fiscal Convention lapsed when the Constitution Act of 1935 came into force. The need was therefore felt for imposing a special responsibility on the Governor-General to prevent penal discrimination against British imports. Discriminatory or penal treatment covered by this special responsibility includes both direct discrimination (whether by means of differential tariff rates or by means of differential restrictions on imports) and indirect discrimination by means of differential treatment of various types of products. No administrative discrimination will be permitted either.

Trade relations between India and the United Kingdom are now governed by the principle of Reciprocity, which means that we can impose no conditions or restrictions upon British subjects domiciled in the United Kingdom and Companies incorporated in the United Kingdom to which Indians or Companies incorporated in India are not subjected in the United Kingdom. (exchange banking)

There is a special application of this principle to shipping. Ships registered in the United Kingdom cannot be subjected by law in British India to any discrimination whatsoever, as regards the ship, officers or crew, or passengers or cargo, to which ships registered in British India are not subjected in the United Kingdom.

This principle makes it impossible to reserve coastal shipping to Indian vessels.

→ Equal treatment.

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Ships registered in India may compete on equal terms with ships registered in the United Kingdom in the British coasting trade, and in the carrying trade between the United Kingdom and foreign ports. It is extremely doubtful if this privilege that Indian shipping has acquired under the principle of reciprocity is, at any rate, at present of any great value.

THE OTTAWA AGREEMENT

The United Kingdom-Indian trade agreement was signed in August 1932 and the preferences came into force from November of the same year. The main terms of the agreement were the following:

I No duties were to be levied on Indian goods imported into the United Kingdom which were admitted free of duty under the British Import Duties Act of 1932.

II Preference of 9s. 4d. per cwt. was to be granted to Indian coffee.

III The margin of preference enjoyed by Indian⁽²²⁾ goods specified in schedule C over similar foreign goods was not to be reduced. If greater preference was granted to such goods imported from any other part of the Empire into the United Kingdom, such greater preference was to be extended to Indian goods. Schedule C comprised 22 articles including tea, leather (undressed hides and skins), teak and other hard woods, woollen carpets and rugs, tobacco, castor seed, groundnuts and lead.

IV The duty on either wheat or lead might be reduced if at any time Empire producers were unable or unwilling to offer these commodities at prices not exceeding the world prices and in quantities sufficient to supply the requirements of United Kingdom consumers.

V Goods specified in schedule D were to be admitted free of all duty from all sources. Schedule D comprised the following articles: shellac, seed lac and stick lac, raw jute, myrobolans, broken rice, mica and Indian hemp. India needed no preference in respect of these goods.

VI Greater use of Indian cotton in the United Kingdom was to be encouraged, whether by research, propaganda or improved marketing.

The British Government undertook to invite the non-self-governing Colonies and Protectorates, with certain exceptions, to accord to India any preference which may, for the time being, be accorded to any other part of the British Empire and to accord to India new or additional preferences on specified commodities (e.g., Ceylon was to be invited to grant 10 per cent preference to imports from India of cotton yarn and piece-goods, iron or steel, perfumery, apparel, boots and shoes etc.).

India on her part agreed to grant 10 per cent preference to British imports of 158 articles and $7\frac{1}{2}$ per cent preference to 5 other articles mentioned in schedule F.

Where protective duties were not imposed on goods of cotton and artificial silk, the Government of India undertook to grant 10 per cent preference to British imports of these goods.

The Ottawa Conference, in taking note of the trade agreements, recorded its conviction: "That by the lowering or removal of barriers among themselves provided for in these Agreements, the flow of trade between the various countries of the Empire will be facilitated, and that by the consequent increase of purchasing power of their peoples, the trade of the world will also be stimulated and increased".

The Conference also adopted a resolution concerning industrial co-operation between various parts of the Commonwealth. The Imperial Economic Committee on Imperial Industrial Co-operation had noted that industrial production had developed and that it would continue to develop in the less industrialised parts of the Commonwealth. "These developments" says a resolution adopted by the Ottawa Conference, "involve changes in the economic structure both of the more industrialised and of the less industrialised countries; and the Conference notes with approval the view of the Committee that 'the object of co-operation is not, and must not be, to arrest change, but wisely to direct and facilitate its course'".

In the opinion of the Conference the object of the policy of industrial co-operation should be to 'secure the best division of industrial activities among the several parts of the Commonwealth

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and the ordered economic development of each part with a view to ensuring the maximum efficiency and economy of production and distribution'.

No scheme of such Imperial division of industrial activities has been worked out. The idea, probably, is, to safeguard the interests of British industries without unduly restricting the industrial development of other parts of the Commonwealth. So far as India is concerned, it would be difficult to specify what we may or may not manufacture. A scheme of industrial co-operation prepared in 1913-14 would not have provided for the heavy reduction in British imports of cotton piece-goods such as has actually occurred, or for the very great expansion of Indian mill production such as has taken place. There is no good reason why India should not learn to make machines or essentially modern consumers' goods which are at present all imported.

The Ottawa Agreements have undoubtedly encouraged inter-Imperial trade. This is shown by the tables given below:

TRADE OF THE UNITED KINGDOM

1. Imports (as percentage)

From	1929	1932	1933	1934	1935	1936
Irish Free State ..	3·7	3·8	2·6	2·4	2·5	2·4
Canada ..	3·8	6·1	6·8	6·9	7·4	8·8
Australia ..	4·16	6·6	7·2	6·8	7·2	7·2
New Zealand ..	3·9	5·3	5·5	5·5	5·0	5·1
Union of S. Africa	2·1	2·2	2·1	1·6	1·8	1·6
	—	—	—	—	—	—
Total Dominions ..	18·0	24·0	24·3	23·2	23·9	25·1
India ..	5·2	4·6	5·5	5·8	5·4	6·1
Colonies*	5·6	6·8	7·1	8·1	8·3	7·9
	—	—	—	—	—	—
Total, Empire ..	28·8	35·4	36·9	37·1	37·6	39·1
Foreign Countries ..	71·2	64·6	63·1	62·9	62·4	60·9
	—	—	—	—	—	—
	100·0	100·0	100·0	100·0	100·0	100·0
	—	—	—	—	—	—

* Together with New Foundland.

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2. Exports (as percentage)

To	1929	1932	1933	1934	1935	1936
Irish Free State ..	5.0	7.1	5.2	4.9	4.8	4.8
Canada ..	4.8	4.5	4.7	5.0	5.0	5.2
Australia ..	7.4	5.5	5.8	6.6	6.9	7.3
New Zealand ..	2.9	2.8	2.6	2.9	3.1	3.9
Union of S. Africa ..	4.5	5.0	6.3	7.6	7.9	8.5
	—	—	—	—	—	—
Total Dominions ..	24.6	24.8	24.7	27.1	27.7	29.7
India ..	10.7	9.3	9.1	9.3	8.9	7.8
Colonies *	8.6	11.2	10.7	10.5	11.4	11.4
	—	—	—	—	—	—
Total, Empire ..	43.9	45.3	44.5	46.9	48.0	48.9
Foreign Countries ..	56.1	54.7	55.5	53.1	52.0	51.1
	—	—	—	—	—	—
	100.0	100.0	100.0	100.0	100.0	100.0
	—	—	—	—	—	—

It is seen that imports into the United Kingdom from India increased from 4.6 per cent of total imports in 1932 to 6.1 per cent in 1936, but British exports to India fell from 9.3 per cent of the total in 1932 to 7.8 per cent in 1936. British exports to the Dominions increased from about 25 per cent to 30 per cent in the same period. The share of the Empire in British imports increased from 35.4 per cent to 39.1 per cent, and in British exports from 45.3 per cent to 48.9 per cent in the same period.

* Together with New Foundland.

(Hudson, *Slump and Recovery*, pp. 295-96.)

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The following table shows our trade with the United Kingdom,
the British Empire and Foreign countries.

DIRECTION OF TRADE

	UNITED KINGDOM		BRITISH EMPIRE		FOREIGN COUNTRIES		TOTAL	
	Crores		Crores		Crores		Crores	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to	Imports	Exports
1928-29	113·2	69·0	137·1	115·0	116·2	215·1	253·3	330·1
1929-30	103·1	67·3	125·9	111·0	114·0	199·8	240·8	319·8
1930-31	61·3	51·8	76·0	86·1	88·8	104·4	164·8	220·5
1931-32	44·8	43·5	56·6	68·7	69·7	87·2	126·3	155·9
1932-33	48·8	37·0	59·4	59·8	73·2	72·6	132·6	132·4
1933-34	47·6	46·6	57·7	67·6	67·4	78·7	115·4	146·3
1934-35	53·7	47·9	65·4	68·9	66·9	82·8	132·3	151·3
1935-36	52·2	49·8	65·5	73·3	68·9	87·2*	134·4	160·5
1936-37	48·1	63·5	61·7	89·7	63·6	106·7	125·2	196·1
1937-38†	51·8	59·6	95·0	91·9	78·4	89·0	173·4	180·9

PERCENTAGES

1928-29	44·7	20·9	54·1	34·8	45·9	65·2	100	100
1929-30	42·8	21·7	52·3	35·7	47·7	64·3	100	100
1930-31	37·2	23·5	46·1	39·0	53·9	61·0	100	100
1931-32	35·5	27·9	44·8	44·1	55·2	55·9	100	100
1932-33	36·8	27·9	44·8	45·2	55·2	54·8	100	100
1933-34	41·2	31·9	50·0	46·2	50·0	53·8	100	100
1934-35	40·6	31·6	49·4	42·9	50·6	57·1	100	100
1935-36	38·8	32·8	48·7	45·7	51·3	54·3	100	100
1936-37	38·4	32·4	49·3	45·3	50·7	54·7	100	100

* Including for Orders' Cargoes.

† The figures for 1937-38 are not comparable with those of the preceding years on account of the separation of Burma.

(Exports do not include re-exports in this table).

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It is seen that the share of the United Kingdom in our imports increased from 36·8 per cent in 1932-33 to 41·2 per cent in 1933-34, but has steadily fallen since then. Still in 1936-37, 38·4 per cent of our total imports came from the United Kingdom as compared with 36·8 per cent in 1932-33 and 35·5 per cent in 1931-32. The share of the United Kingdom in our exports increased from about 28 per cent in 1932-33 to 32·4 per cent in 1936-37. Taking the British Empire as a whole, the share of the United Kingdom and other empire countries in our imports increased by about 4½ per cent between 1932-33 and 1936-37, while their share in our exports has practically remained unchanged.

The Indian Legislative Assembly voted for the termination of the Ottawa Trade Agreement in 1936.

What is the best policy for India in the existing circumstances?

It is impossible for any one not to agree with the opinion expressed by Dr. B. K. Madan, who has made a special study of the subject: "In days of freer and wider markets, it might have been possible for India to steer a solitary course, independent of the general policy of the Empire, relying upon the strength of her position and the favourable fiscal policies of foreign States. It is not the part of wisdom now, in face of the restrictionist temper of the world, of depressed prices, reduced trade and contracted markets, to cut adrift from the one large bloc of comparative freedom of trade available to India to join, even if it should involve some measure of discrimination against foreign nations."

We cannot forget that the United Kingdom is the largest single purchase of our goods, and that the British Empire takes something less than half of our total exports. Nor can we forget the fact that the leading foreign countries are zealously pursuing the ideal of self-sufficiency and that they are not interested in India's good. In these circumstances we should endeavour to conclude the best possible bargain with the United Kingdom and other Empire countries. Cutting off one's nose to spite one's face is not the part of wisdom, whatever our political differences with the United Kingdom.

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Dr. Madan in his brief but excellent paper read before the Indian Economic Conference, 1938, pointed out that India as a part of the British Empire, is a party to a large number of mutual 'most favoured nations' treaties with foreign nations, but this clause applies only to tariffs, and may be circumvented by means of quotas and other discriminating devices. Our object should therefore be to secure "fair and equal treatment for Indian exports in respect not only of tariffs, but so far as possible, of quota and exchange allocation as well."

Cotton is an important article of export, particularly from the point of view of the Punjab. The Indian Delegation to Ottawa raised the question of a duty on foreign cotton in the United Kingdom but it was made plain to the Indian Delegation that the British Delegation "could not entertain this suggestion, and that the interests of their own industry placed it out of court." (Report p. 21). The Indian Delegation recognised the importance of cheap raw material to the British cotton industry. It is not possible for the United Kingdom to ruin her industry by raising the cost of cotton to the British manufacturer.

The United Kingdom, according to agreement encouraged the use of Indian cotton in Lancashire mills, and for some years exports of cotton to the United Kingdom increased:

Exports in tons of Raw Cotton to

		United Kingdom	Japan	Total
1932-33	..	29,846	193,686	368,333
1933-34	..	61,026	182,565	489,277
1934-35	..	61,955	366,891	623,276
1935-36	..	81,454	314,187	606,536
1936-37	..	107,246	433,232	762,142
1937-38	..	70,554	242,695	487,784

There was a heavy decline in total exports in 1937-38 as compared with the preceding year. The share of the United Kingdom declined slightly from 14·4 per cent of the total in 1936-37, to 14 per cent in 1937-38.

The future of cotton exports to the United Kingdom is uncertain. Lancashire is not pleased with us, since we are doing nothing to encourage the consumption of Lancashire cloth—on the contrary the progress of the Indian mill industry spells the approaching doom of Lancashire imports into India. Lancashire has threatened to boycott our cotton, and it is possible for it to do so.

THE NEW INDO-BRITISH TRADE AGREEMENT

A new trade agreement with the United Kingdom has been signed and came into operation from April 1, 1939, in spite of its rejection by the Indian Assembly.

The chief features of the new Agreement are the linking of the preference for United Kingdom piece-goods with the offtake of Indian cotton by the U.K. on a reciprocal graduated scale; preference for 82 per cent of Indian exports to the U.K.; a separate agreement to be negotiated with Ceylon; and a reduction from 106 to 20 U.K. items receiving Indian preference.

The value of imports falling in the preferential category estimated at Rs. 18,75 lakhs in 1935-36, has been reduced to an annual average of Rs. 7,68 lakhs. Only 16 per cent of India's imports from the U.K. are subject to preference.

A preference of 10 per cent *ad valorem* has been given to castor seed, coir yarn, cotton yarn, goat skins, groundnut, leather, linseed, paraffin wax and oilseed cakes.

A preference of 15 per cent *ad valorem* has been given to nonessential vegetable oils, dressed leather and certain jute manufactures such as cordage, cables, ropes and twines.

A preference of 20 per cent *ad valorem* has been given to Indian coir mats and matting, cotton manufactures, and certain jute manufactures such as sacks and bags.

Specific rates of preference have been given to magnesium chloride, coffee, tea and rice (excluding broken rice).

Hand-made knitted carpets get a preference of 4s-6d. per sq. yd. Other carpets get 20 per cent *ad valorem*. Lac, myrobolans, mica, raw jute and Indian hemp are to be imported free of duty into the United Kingdom.

India accords 10 per cent preference to goods like cement, chemicals, drugs and medicines, refrigerators, sewing machines, wireless instruments and apparatus, cycles and photographic appliances. A preference of $7\frac{1}{2}$ per cent is accorded to motor cars, motor cycles and motor buses.

Preferences granted to India have proved of value in the case of groundnut and linseed, coir yarn, mats and matting, woollen carpets and rugs and jute manufactures. Preference in the case of jute manufactures enables India to compete on equal terms with U.K. industry. With the aid of the preference India has ousted foreign suppliers from the U.K. market for coir yarn, mats and matting. The preference on tea (2d. per cwt.) will make non-Empire competition difficult.

Criticism in the Indian Assembly was chiefly directed against the clauses relating to reduction in the duty on imports of cotton piece-goods.

As we have seen, the duty on British cotton piece-goods was reduced from 25 to 20 per cent in 1936, but this reduction in duty failed to arrest the decline in the imports of British cloth. The new Agreement fixes the 'basic rates' at $17\frac{1}{2}$ per cent *ad valorem* on printed goods; 15 per cent *ad valorem* or As. 2, $7\frac{1}{2}$ pies lb. whichever is higher, on grey goods; and 15 per cent *ad valorem* on all others.

The Agreement further provides for a reduction of import duties by $2\frac{1}{2}$ per cent if imports of British cloth do not exceed 350 million yards in any cotton piece-goods year. If imports exceed 500 million yards, the duties may be increased above the basic rates. The basic rates will apply if imports do not exceed 425 million yards.

The Agreement provides that if imports of Indian cotton into the United Kingdom fall below 400,000 bales in the cotton years ending December 31, 1939 or December 31, 1940, and below 450,000 bales in any subsequent cotton year, the basic duties charged on imports of U. K. cotton piece-goods may be increased. There is also a reward for an increase in the consumption of Indian cotton in the United Kingdom. Thus, if in any cotton year, the

U. K. offtake exceeds 750,000 bales, the duty charged on U. K. printed cotton piece-goods will be reduced in the following cotton piece-goods year to a level not exceeding the duty on other U. K. cotton piece-goods.

The Commerce Member, Sir M. Zafarullah, stressed the value of the link between the offtake of cotton and imports of piece-goods. But it does not seem that Lancashire, under the new agreement, will be obliged to buy much more of our cotton than it has done in the past few years. Sir H. P. Mody also said that what Lancashire had agreed to take was the sort of cotton for which there was a market in India and elsewhere.

CHAPTER XI

GOLD EXPORTS

Van Twist in his *Generale, Beschivinghe van Indien* (1638) tells us that although there were no gold or silver mines in India, large quantities of both were imported from foreign countries, and that it was forbidden to export them. "India is rich in silver," wrote Hawkins, "for all nations bring coyne and carry away commodities for the same; and this coyne is burried in India and goeth not out."¹ Terry estimates that an Indian ship returning from the Red Sea was usually worth two hundred thousand pounds sterling, most of it in gold and silver. "Besides," he adds, "for what quantity of monies comes out of Europe by other means into India, I cannot answer; this I am sure of that many silver streames runne thither as all rivers to the sea, and there stay, it being lawful for any nation to bring in silver and fetch commodities, but a crime not less than capital to carry any great summe thence"². Mandelslo also noted that it was "prohibited, upon pain of death, that any should transport either Gold, Silver, or coined Brass out of the Country"³.

India imported gold heavily also from 1900-01 to 1930-31 as is shown by the table below:

Gold, lakhs of Rs.

		Imports	Exports	Net imports
1900-01 to 1904-05	..	75,33	44,14	31,19
1905-06 to 1909-10	..	87,45	28,73	58,72
1910-11 to 1914-15	..	149,59	22,87	126,72
1915-16 to 1919-20	..	98,22	31,16	67,06
1920-21 to 1924-25	..	182,24	38,69	143,55
1925-26 to 1930-31	..	121,53	1,01	120,52

¹ Foster, *Early Travels in India*, p. 112.

² Foster, p. 302.

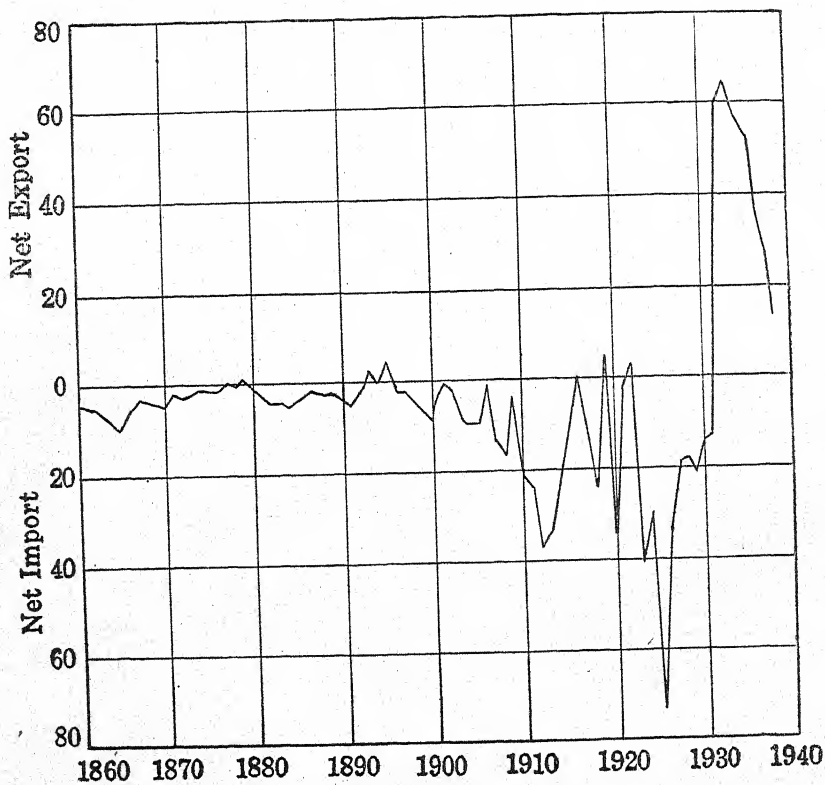
³ *Travels into the Indies*, p. 68.

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CHART No. 20

crores

Gold. 1859-60 to 1937-38



GOLD EXPORTS

It is seen that imports of gold exceeded exports by about 548 crores of rupees. The import of gold came to a sudden end when England abandoned the gold standard, and we linked the rupee to sterling. Since 21st September 1931, gold exports amount to over 321 crores of rupees, and gold continues to flow out.

141-42 This movement of gold from India was entirely unexpected. The Gold Delegation of the Financial Committee of the League of Nations thus speculated about the Indian demand for gold in the depression:

"No doubt the present economic depression may result in some temporary weakening of the Indian demand; on the other hand, it is quite possible that the recent decline in the price of silver will lead to increased purchases of gold. We understand that attempts are being made to extend banking and investment habits in India, but we do not think it would be safe to anticipate any material reduction in the Indian demand for many years to come" (interim Report p. 14).

Since 21st September 1931, no remarkable change in the banking and investment habits has occurred in India. But we have not only suspended our purchases of gold, but are selling gold to the world on an unprecedented scale.

PRICE OF GOLD

We are tempted to sell gold by the rise in its price. Why has the price of gold risen?

The lowest London New York Cross rate (dollars to pound sterling) in September 1931 was 3'60 (parity 4'866 dollars to the pound). This signified a rise of about 35 per cent in the price of dollars in terms of the pound sterling.

The Mint price of gold in England per fine ounce was £4-4-9 3/4. The highest price of gold in London in September 1931 was £5-14-9. The rise in the London price of gold was about equal to the depreciation of the pound sterling in terms of the gold dollar. *standard = 1/12 fine.*

The price of gold rose in India as we had linked the rupee to sterling.

The new gold dollar of the United States contains 13·71 grains of pure gold. As compared with the old gold dollar, which contained 23·22 grains of pure gold, this represents a reduction of about 41 per cent in the fine gold contents of the dollar. The sovereign contains 113·00 grains of pure gold. The old parity between the dollar and the sovereign was $4·866 = 1\text{£}$; the new parity is $8·24 = 1\text{£}$.

But to take an example, on Dec. 24, 1938, the dollar was quoted in London at about 4·67 to the £ sterling. This is equal to a rise of about 76 per cent in the price of the dollar.

The price of gold per fine ounce in London on Dec. 24, 1938, was £7-9-1 which represents a rise of about 76 per cent above the old Mint price of gold.

Before England and India abandoned the gold standard on September 21, 1931, the £ was equal to 4·86 dollars, the rupee was equal to 18d. gold and the price of gold per tola was Rs. 21-3-10 (making no allowance for cost of transportation).

If now the cross-rate were stabilised at 4·86 dollars, the London price of gold would be higher than the old price by 69·5 per cent. Other things being equal, the Indian price would rise to the same extent, or to Rs. 36 per tola.

Actually, if India continued to sell gold, the Indian price would be below Rs. 36.

The connection between the price of gold and exports of gold is shown by the fact that a rise in price leads to greater exports. For example, the London price rose in December 1931; exports of gold from India in that month amounted to about $17\frac{1}{2}$ crores of rupees. Again in December 1932 exports rose to about 10 crores on account of the rise in the London price. In February 1934 exports exceeded 10 crores, as compared with about 5 crores only in February 1933. It was the devaluation of the dollar that raised the price of gold in February 1934.

The rise in the price of gold recently has had very little effect in stimulating gold exports. This is probably because the amount of 'distress' gold sold now has decreased. Not because there is no distress in the villages, but because the village people have lost

GOLD EXPORTS

practically all the gold they had. There is still much gold left in India, but it is largely owned by the well-to-do classes, who are not compelled to sell it. It is also realised that there is very little probability of the price of gold returning to the old level, so that there is not much temptation to sell gold in order to make a profit.

ADVANTAGES CLAIMED FOR GOLD EXPORTS

Gold exports have formed the subject of much controversy in India. Non-official opinion regards gold exports with disfavour. The policy of the Government in permitting an unrestricted flow of gold from India has been severely criticised both in the press and in the Assembly.

The official view, on the other hand, to which expression has been given both by the Viceroy and the Finance Member of the Indian Government, is that gold exports are of direct economic advantage to the country.

The interest of British M. P.'s in our gold exports and the dumb millions of India is shown by a question asked early in March 1932 in the House of Commons by Mr. Peter McDonald M. P., suggesting the desirability of Government action with the object of making the rise in the price of gold widely known throughout India. Sir Samuel Hoare assured Mr. Peter McDonald that the fact that gold was realisable at advantageous prices was already widely published in the country.

What is the benefit that gold exports have conferred on the masses of India or the country in general?

Gold exports have enabled the United Kingdom to pay part of her debts to France and the United States. This aspect of gold exports does not interest official India, and we shall say no more about it. The advantages which are emphasized in official utterances and in official reports (e.g., Report of the Controller of the Currency) are the following:

(1) Gold exports have led to an improvement in the credit of the Government.

This has several aspects, of which not the least important is the maintenance of the 10d. sterling exchange.

INDIA BEFORE AND SINCE THE CRISIS

At a time when exports of commodities were declining, the maintenance of exchange without gold exports would have proved difficult, if not altogether impossible. From April 1, to the end of September 1931 the highest rate for telegraphic transfers on London was a little less than 18d. In September the highest rate was $17\frac{3}{4}$ d. which is equal to gold export point. But as soon as gold exports began, exchange improved. By the end of October 1931 it had risen to 18 $1\frac{1}{3}$ d. Tenders invited for £500,000 at the end of October were allotted at 18-3/32d. The weekly offer of sterling was gradually raised to £1 million. Exchange weakened in the latter half of November, but, says the Controller of Currency in his report for 1931-32, "there was no week in which Government was not able to obtain the full amount offered for tender and effect purchases of intermediates at $1\frac{1}{32}$ d. above the tender rate" (pp. 12-13).

In 1932-33 Government purchased about £36 millions at an average rate of 18·15d. Exchange fell early in June on account of the scarcity of export bills. The improvement of exchange from the middle of June was partly the result of an increase in gold exports due to rise in the price of gold.

Exchange stability improves Government credit. Government credit also improves when Government is able to meet its maturing obligations. The export of gold conferred a double benefit on the Government of India in enabling it to maintain exchange and to meet its obligations. The Controller of Currency says in his report for 1931-32.

"One result [of gold exports] was that the Government of India was able to purchase large amounts of remittance which not only materially improved its credit abroad by enabling it to pay off the 15 millions sterling debt maturing in January, but also enabled it to reduce its floating debt in India by the creation of the fresh currency required to pay for the gold" (para 11).

It is stated in the same officer's report for 1932-33 that the improvement in the financial position of the Government in this year was "mainly due to the continuance of the export of gold on a large scale" (para 6). The Government made purchases

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of sterling in excess of its requirements, which enabled it to "reinforce the position of the Home Treasury". Further the "immense improvement" in the credit of the Government enabled the Government to borrow funds for short periods at very low rates, and to fund a substantial proportion of its short term loans into long-term loans at very favourable rates. The treasury bills outstanding on the 31st of March 1933 amounted to Rs. 26 crores against Rs. 47½ crores on April 1, 1932, or there was a reduction of 21½ crores in the amount of these obligations. The average treasury bill yield in March 1933 was 1·36 per cent as compared with 5·13 in April 1932—a very substantial reduction. The rate of interest on medium and long-term loans was reduced gradually from 5½ per cent to 4 per cent.

Sir George Schuster drew attention to the improvement of Government credit resulting from the paying off of treasury bills and sterling debts in his budget speech for 1932-33. In the 15 months from the end of September 1931 to the end of September 1932 gold exports were valued at £80 millions. Of this gold Government acquired £70 millions and £10 millions was used to repay foreign funds temporarily invested in India. Out of the £70 millions of gold which the Government had acquired by open purchases in the market as currency authority, it used £34½ millions to meet its own current requirements and £35½ millions to repay sterling loans and strengthen its reserves. "Therefore", Sir George concluded, "out of the total £80 millions of gold proceeds only £34½ millions were used to meet current requirements, and the balance of £45½ millions went to reduce India's external obligations and strengthen her public reserves".

(2) Gold exports strengthened India's public reserves. It may be thought that the reserves were strengthened by the addition of gold. No. We had no use for gold in the reserves. At the close of the year 1932-33 the gold holdings of the Government amounted to 44,36 lakhs, an increase of 2 lakhs as compared with the position at the close of the proceeding financial year. The market value of the gold reserves increased from 58 crores to 63 crores. "In other words", says the Controller of Currency in his

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report for 1932-33, "there was practically no increase in the quantity of gold in the reserve during the year but the value at the market rate increased by nearly 5 crores over that of the last year" (para 32). To the suggestion that the Government, instead of permitting gold to flow abroad, might have bought, at any rate, some of it for addition to the reserves, Sir George Schuster's reply was: "We already have our proper proportion of gold in our currency reserves" (para 26 of the budget speech for 1933-34). What we wanted in the reserves was not gold but sterling securities. We sold the gold to the United Kingdom, and added sterling securities to the reserves.

(3) Gold exports have meant the conversion of one form of reserve into another.

It is beyond question that a large amount of the gold has been sold by the agricultural population to meet daily necessities and to pay Government dues.

An Associated Press telegram, which was published in the *Tribune* of Lahore of 27th February, 1932, thus explained the flight of gold from Siraj Ganj (Bengal): "Hard pressed by acute financial stringency the middle class people, agriculturists and even some landlords have been selling the ornaments of their wives and other family women".

According to a statement made by Sir L. Hudson in the Legislative Assembly on March 2, 1933, a very large percentage of the sale of gold represented "the forced sale of capital resources to provide for ordinary, every day necessities of daily life".

Some of the gold proceeds have been converted into interest-bearing Government obligations. In this sense the sale of gold represents the conversion of hoards, a useless form of reserve, into Government paper, a useful form of reserve. But it is not 'distress' gold that has been converted into Government paper.

In a sense, even the sale of 'distress' gold means the conversion of one form of reserve into another. Food and clothing represent reserves of concentrated energy. The payment of Government dues is a source of moral satisfaction. The cultivator who has sold his gold reserves to meet Government dues and current require-

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ments may be said to have converted barren reserves into valuable reserves of moral and physical health and strength!

(4) Gold exports have encouraged the flow of international trade.

It is pointed out in the report of the Controller of Currency for 1932-33 (para 6) that gold exports brought increased revenue from certain import duties, "as it is clear that a proportion of the profits on gold sales must have been utilized for increased purposes of imported articles". There was a more explicit reference to this advantage of gold exports in Sir George Schuster's Budget speech for 1933-34. Imports of goods in 1932-33 were valued at about 132½ crores of rupees. To this 45 crores of customs duties must be added, for the consumer of imports must pay the price of the imported goods *plus* the duty. The total cost of imports was thus Rs. 177½ crores. Exports of Indian merchandise in the same year amounted to Rs. 132 crores. Thus gold proceeds equal to Rs. 45½ crores were used to pay for imports. (Thereby we avoided reducing our consumption to the desperately low level which would otherwise have been necessary). And to the same extent we encouraged the flow of international trade. Sir George Schuster referred to artificial restrictions on imports by way of high duties and exchange restrictions, which he described as "the worst feature of the present world situation". And he added: "This is checking the flow of international trade, so that its channels are gradually becoming completely dry." We ourselves have sinned in this respect. And, but for the export of gold, imports of goods into India would shrink still more. "India in fact", said Sir George Schuster, "has been able to release into the world a commodity for which alone there is an undiminished market and the possession of which, if it is used as a basis for currency, does not diminish but rather increases the purchasing power of the countries which absorb it" (para 19 of the budget speech for 1933-34). Our gold exports thus acquire an international significance. They have not only helped India to buy more foreign goods, but benefited the whole world. If an economic policy designed to benefit others merits a reward in heaven, India, by exporting gold, has been accumulating

huge reserves of credit in the other world, which may be described as a process of conversion of material into spiritual reserves!

If the purchasing power of other countries increases, they may buy more of our goods. Gold exports may therefore be regarded as a disguised stimulus to exports of goods. By exporting gold, India, as Sir George Schuster said, is increasing "the purchasing power of her own potential customers". We might have attempted to develop exports by increasing our own power of potential competition. But this is a difficult process.

(5) The export of gold means that the people of India are using their reserves as they are meant to be used.

The Viceroy in the course of an address to the Legislative Assembly on January 25, 1932 said:

'A time has indeed come when India's huge investments in gold—which have for many years been barren and unproductive—are proving profitable to the private holders and to the State alike. Those who would press a contrary view profess to argue that India is weakening her position by this process. But if the holding of gold in a country is to be regarded as an investment and a source of strength, of what use is it if it is never to be drawn upon? What is the use of a reserve against bad times, if when the bad times come it is not to be used?'

"Reserves are being drawn upon in hard times", said Sir George Schuster, "and as His Excellency asked, 'of what use is a reserve if it can never be drawn upon?' If gold "is *never* to be used it might just as well be at the bottom of the sea".

This implies the admission that the gold that has been sold is 'distress' gold, or that people are selling it to tide over 'terribly difficult times.'

If that is so, the sale of gold means a process of living on capital—a dangerous process in the case of a country as in the case of an individual. When terribly difficult times come the first duty of the Government is to reduce tax burdens and to increase the purchasing power of the people so that they are not forced to live on capital. The realization of capital is a process of impoverishment, not enrichment of a country.

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Taking the view of gold exports that they did, our highest authorities have encouraged the Indian holder to part with his gold. "In fact it is clear", said the Viceroy, "there is not only no cause for anxiety in what is now happening, but that it is conferring a great benefit on both public and private interest." In his budget speech for 1932-33 the Finance Member, with all the weight of his great authority, advised the people to sell gold. Gold was over-valued. England, and with her more than half the world, had abandoned the gold standard. America was still on gold, but she was straining every effort to bring about a rise in the gold prices of commodities. That meant that the value of gold would fall. If America succeeded in her attempt to lower the gold prices of commodities, she might save her currency system. If she failed, she would have to go off gold. "It is impossible to escape the conclusion", concluded the Finance Member, "that the world is faced now with two alternatives, either to find some means (by better international arrangements and the better use of the available monetary stocks of gold) for reducing the real value of gold as expressed in commodities, or to abandon gold altogether as the basis of currency. If those are the two alternatives then surely one is forced inevitably to the conclusion, that in either case—whichever of the two alternatives actually happens, it would, taking a long view, pay to part with gold now. Why therefore should the people of India be deprived of the right to exercise their own judgment in this matter and sell their gold?" (para 73).

Which of the two alternatives happened? About a year later the United States devalued her dollar, and the price of gold not only did not fall, but rose. The highest price of gold in March 1933—it was early in March 1933 that the Finance Member advised the people of India to part with their gold—was £6-1-11½. Early in February 1934 the London price of gold was 140 shillings. The highest price of country bar gold in Bombay in March 1933 was Rs. 29-15-6; on February 2, 1934, it was more than Rs. 35, and at the present time it is more than Rs. 37 (May, 1939). Those who, following the advice of our greatest financial authority,

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parted with their gold in March 1933, would have certainly lost nothing by holding on to gold.

FUTURE PRICE OF GOLD

The Indian price of gold, as we have seen, rises and falls with the London price which, in the turn, is determined by the dollar-sterling rate.

In New York gold has a fixed price, 35 dollars per fine oz. If now £ sterling = 5 dollars, the London price of gold would be £7 sterling.

We have seen that in 1934 the United States devalued its gold dollar by 41 per cent. If England returned to the gold standard without devaluing the gold £, £ sterling would be equal to 8'24 dollars and the London price of gold would be as before 21st Sept. 1931 or 84'11 shillings per fine oz.

If, with England India returned to the gold standard and the exchange value of the rupee was 18d. = 8'475 grains of pure gold as before, the Indian price of gold would be, as before, Rs. 21-3-10 per tola.

But this is wholly impossible. England will eventually return to the gold standard but there must be devaluation of the British £. No devaluation would end British exports.)

Suppose the £ is devalued to the same extent as the United States gold dollar, that is by 41 per cent. Then the old relation between the £ and the dollar would be restored, or the £ would be equal to 4'86 dollars. In that case the price of gold in England would be about 144s. The price corresponding to this in rupees per tola, at 18d. to the rupee, is Rs. 36.

It is not improbable that the £ would be stabilised at a rate below 4'86 dollars. If the rate of 4'50 dollars to £ is chosen, the devaluation of the £ would amount to 45'4 per cent as compared with the 41 per cent devaluation of the American dollar, and the price of gold in London would rise by 8 per cent above 144s. The London price of gold at 4'50 dollars to the £ would be about 155'5s. A lower rate of stabilisation than 4'50 dollars would still further raise the price of gold.

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Assume that there is no lowering of the exchange ratio in India. If we return to the gold standard with the rupee devalued to the same extent as the £ (say 45·4 per cent), the rise in the price of gold in India would be equal to that in England. The price per tola corresponding to 155·5s. per fine oz. is about Rs. 39. If exchange fell to 16d., the Indian price would rise 12½ per cent further, or it would be a little less than Rs. 44.

We have assumed that the £ is stabilised at 4·50 dollars. If, however, there is no fall in the £ below the present level, 4·67½ dollars to the £, and the £ is stabilised at this rate, the London price of gold would be what it is at present, £7-8-8½ and the Bombay price would be Rs. 37-2. The possibility, however, remains of the Indian price rising to over Rs. 41 on account of a fall in exchange to 16d.

DEMAND AND SUPPLY

The chief determining factor as regards the future price of gold is the extent of the devaluation of the £ and the rupee. But it will not be irrelevant to consider the demand for and the supply of gold.

Before the abandonment of the gold standard by England fears were entertained of a decline in world gold production. Mr. Kitchin, one of the world's greatest authorities on gold, wrote in 1930:

"There is reason to believe that 1915, with its total of £96,400,000—apart from some outstanding new discovery—will prove to have been the zenith of the world's gold output and that, though the production, after falling to £68,000,000 in 1921, has recovered to £83,500,000 at the present time (55 per cent. of this recovery being due to the New Rand and the balance to Canada and Russia), the prospects are that there will be no further recovery, but rather a decline, increasing with time, after about 1934" (Report of the Gold Delegation, 1930, p. 58).

The advance of metallurgy was not expected to lead to greater gold production:

"It has already been indicated", says Mr. Kitchin, "that little is to be hoped from improved metallurgy, while the limits and possibilities of existing gold fields are, perhaps, fairly known. Subject to the qualification as to the possibility of some outstanding new discovery, there seems to be no prospect that the world's production will advance beyond the present level" (*Ibid*, p. 60).

Mr. Kitchin anticipated that gold production would decrease after 1934—"at first very slowly and then at a greater rate" (p. 61).

So far from declining, world gold production has increased at a most remarkable rate since 1934. The world's output of gold was in 1930, 20,904,000 fine ozs., in 1934, 27,372,000 fine ozs., in 1937, 34,783,000 fine ozs., and in 1938, 36,700,000 fine ozs. This is a record increase in output. Estimates for 1937 and 1938 assume Soviet production of 5,000,000 fine ozs.

It is obvious that the rise in the price of gold has given an enormous stimulus to gold mining. Soviet production is a new factor.

Gold in Soviet Russia is recovered from alluvial gold fields. Very little is known, outside Russia, about the extent or richness of these gold fields. The discovery of gold in Russia caused a scare in 1937 when Russia began to sell her gold in London. Every one thought that the price of gold would fall heavily. No fall actually occurred.

It is stated that gold production in Russia 'is not meant to be a commercial proposition' (*Will Gold Depreciate* by Paul Einzig, p. 41). The Russian output in 1936 was only 9'8 ~~ozs.~~ per head of the labour employed, as compared with 36'6 ozs. per head in South Africa. With her gold Russia can purchase machines or whatever else she requires abroad, and since the gold industry is a State industry, the cost of production of gold is immaterial. The State may sell gold abroad at a price less than cost of production, making good the loss from profit earned in other industries.

In normal times a great increase in the supply of gold would lead to the depreciation of gold or a great rise of prices. But we

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are not living in normal times. In recent years, while India has exported over 321 crores worth of gold, people and banking institutions in the West are hoarding gold. The chief cause of hoarding is economic and political instability. Any one who thinks that the price of gold may fall on account of increase in production should consider two things, (a) if war comes, the price of gold will rise, not fall; (b) so long as the danger of war remains, hoarding by private individuals and central banks in the West will not cease. Paul Einzig says: "With the advent of the German National Socialist regime and the adoption of an aggressive foreign policy by Italy, however, every European country has to envisage the possibility of a war in the relatively near future. And it is essential, for considerations of national defence, to acquire and retain a substantial amount of gold to pay for the imports of raw materials and food during a prolonged war" (p. 59 Ibid).

The view of gold taken in other countries suggests that all along, since 1931 official India has taken a perverted view of our gold exports. Sometime ago when a member of the Indian Legislative Assembly wanted to raise a discussion on this question, leave was not granted by the Government. It was not 'in the public interest' to discuss gold exports!

The case against gold exports may be thus summarised:

1. If it is certain that the price of gold will fall in the near future, it would be desirable as Mr. Peter McDonald M. P. suggested to Sir Samuel Hoare in the House of Commons, to make the fact of the rise in price widely known in India. The rise in price may be announced by beat of drum in every village and in every town, and the people exhorted, as Sir George Schuster exhorted them in 1933, to part with their gold now. It would be profitable to sell gold at Rs. 37, and to buy it back later, say at Rs. 21. But it has been argued above that the price of gold is not likely to fall. The sale of gold then is not a profitable transaction. The export of gold means loss to India, for India may have to buy gold later at a price higher than the present selling price.

2. Even if exports were not restricted by the rise of national economies, tariffs, quotas and prohibitions—in view of the revolution of agricultural methods and practices in the West, and the difficulty of modernising Indian agriculture, Indian exports in the coming years would expand slowly if at all. India, even if she wants to buy gold, will possess very limited means to pay for it.

3. Unless the present relation between the prices of primary products and manufactured goods is reversed, the process of buying gold in the future will be costly for India. We exported wheat worth 17 crores in 1924-25. In the first place no one wants our wheat now. In the second place, on account of the lower price of wheat, much greater quantities of wheat will have to be given to acquire a given amount of gold. The terms of foreign trade have moved against us, thus increasing the cost of good in terms of food-stuffs and raw materials.

4. Gold is not like tea, jute or cotton. We do not raise crops of gold. The more of gold goes out, less of it remains in the country. And considerations advanced in the preceding paragraphs suggest that the gold which leaves us now will never come back. It leaves us for good.

5. Gold is not like other commodities. It is the sinews of war. It is the basis of credit. Even if gold in our hoards is barren it would be better to keep it than to lose it. It may be utilised latter as reserves for a widely extended system of banking.

6. The individual holder for various reasons, is forced to realise his capital, but that does not mean that gold must be exported. The Government may buy it and preserve it in the general interests of the country.

7. The export of gold has enabled the Government to maintain its credit and the rate of exchange at a heavy cost to the country. Certain Empire countries, Australia and New Zealand depreciated their currencies below the sterling level without losin prestige.

The force of these arguments may be admitted, but it may still be argued that on account of the fall in our exports of

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merchandise, the export of gold was inevitable. But then, in the first place, there is no occasion for rejoicing because we are exporting gold; nor is the export of gold to be looked upon as a profitable business. In the second place, it is imperatively necessary to cut down the expenditure of the Indian Government in England so as to reduce the heavy burden of our annual sterling obligations. And in the third place, expenditure in India should be cut down ruthlessly, so that those who have been brought to the verge of ruin by the fall of prices are not forced to realise their assets in order to pay Government dues. These measures of economy should be supplemented by a constructive programme of economic development, and particularly agricultural reform and reorganisation, with the object of reducing the imports of goods and services and increasing the cultivators' power of international competition.

Surplus in the gold stock after the war at 400 million Rs. per month

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